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# Independent Evaluation of Comprehensive Primary Care Plus (CPC+)

## First Annual Report
### Supplemental Volume

April 2019

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# Independent Evaluation of Comprehensive Primary Care Plus (CPC+)

## First Annual Report, Supplemental Volume

April 2019


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# EXECUTIVE SUMMARY

Comprehensive Primary Care Plus (CPC+) is the largest and most ambitious primary care payment and delivery reform ever tested in the United States. The Centers for Medicare & Medicaid Services (CMS) kicked off CPC+ in 14 regions across the United States in January 2017 and expanded it to an additional 4 regions in 2018. The goals of CPC+, which builds on the CPC initiative (known as "CPC Classic"), are to increase access to—and improve the quality and efficiency of—primary care, which ultimately is intended to achieve better health outcomes at lower cost. CPC+ also aims to enhance primary care practitioners' experience. To meet these aims, CMS requires CPC+ practices to transform across five Comprehensive Primary Care Functions: (1) access and continuity, (2) care management, (3) comprehensiveness and coordination, (4) patient and caregiver engagement, and (5) planned care and population health.

To bolster support for practices, CMS partnered with 79 public and private payers across the 18 CPC+ regions. CMS and other payers agreed to provide CPC+ practices with enhanced and alternative payments, data feedback, and learning activities to support primary care transformation. Health information technology (health IT) vendors also partnered with CPC+ practices to help them use health IT to improve primary care.

A diverse set of 3,070 primary care practices joined CPC+. The practices will participate in CPC+ for five years. CPC+ practices are split into two groups: Track 1 and Track 2. Compared to Track 1, practices in Track 2 are required to make more advanced care delivery changes to improve the care of complex patients and, to support that work, they receive more financial support and a greater shift from fee-for-service (FFS) toward population-based payment.

This first report to CMS covers the first year of CPC+ for the 2,905 practices in regions that began CPC+ in 2017. The report examines: (1) who participated in CPC+; (2) the supports practices received; (3) how practices implemented CPC+ and changed the way they delivered health care; and (4) the impacts of CPC+ on cost, service use, and limited claims-based quality-of-care outcomes for attributed Medicare FFS beneficiaries.

This executive summary provides a brief overview of the first-year findings, and is followed by a detailed look at the first year of CPC+ for practices that started CPC+ in 2017 and their Medicare FFS beneficiaries. Our main report focuses on the key findings from the first year of our evaluation (Peikes et al. 2019a). Subsequent annual reports will include additional results, and effects on electronic clinical quality measures (eCQMs) and patient and practitioner experience, for practices that began in 2017 and in 2018.

## Overview of Findings

### A. CPC+ participation in 2017 was substantial

**In 2017, CMS partnered with 63 payers and 2,905 diverse primary care practices in 14 regions across the United States. Participation remained relatively stable in 2017.**

- The practices that began CPC+ in 2017 included 13,209 primary care practitioners and together served approximately 15 million patients. Among the patients they served, 2.2 million were attributed Medicare FFS beneficiaries, 3.3 million were attributed by other

payers partnering with CMS, and 9.7 million were not attributed (including patients who were covered by CPC+ payers but were not attributed to a practice, those who were covered by payers not partnering in CPC+, and those who were uninsured).

- In the 14 regions that joined CPC+ in 2017, 4,265 practices applied to participate, and CMS accepted all that met minimum requirements. This process resulted in a diverse group of 2,905 practices that started in 2017.
- Participating practices are diverse; they range in size from 1 to 80 primary care practitioners; are located in urban, rural, and suburban areas; vary widely in ownership structure; and serve Medicare beneficiaries with a range of health care needs and conditions. This should enable CPC+ to generate important lessons for the future of primary care nationwide.
- At the start of CPC+, compared to other practices in their regions, CPC+ practices were slightly more likely to have Patient-Centered Medical Home (PCMH) recognition or to have participated in a prior primary care transformation initiative, and be owned by a health system or hospital.
- Track 2 practices partnered with 1 or more of 66 health IT vendors that committed to provide required CPC+ health IT functionalities and support practices in using them. The five largest health IT vendors together partnered with approximately 80 percent of Track 2 practices, and two-thirds of the 66 vendors partnered with fewer than 10 Track 2 practices each.
- In 2017, participation was stable:
  - Only two small regional payers stopped partnering in CPC+.
  - Four percent of practices (119) stopped participating. The most common reasons they stopped participating were (1) the practice closed or merged with another CPC+ practice (50 practices) or (2) the practice voluntarily withdrew because it had insufficient resources to continue participating (33 practices).

## B. CPC+ practices received significant support

**CPC+ practices received a significant amount of enhanced and alternative payments, data feedback, and learning support from CMS and other payers, as well as health IT support from vendors. Still, many CPC+ practices indicated that they needed additional funding and/or more guidance from payers and vendors to meet CPC+ care delivery requirements and transform how they deliver care.**

**Payments.** In 2017, the median care management fees practices received for participating in CPC+ from CMS and other payers, over and above what they already receive for providing care, exceeded $88,000 per Track 1 practice (which translates to $32,000 per practitioner on average) and $195,000 per Track 2 practice (which translates to $53,000 per practitioner on average).

Although Medicare FFS accounted for 36 percent of attributed CPC+ patients, CMS provided 76 percent of reported care management fee payments. CMS paid higher care management fees per patient than other payers, in part to compensate for the higher needs of

Medicare FFS beneficiaries. Most of the payments that other payers provided were also provided to non-CPC+ practices and would have been available to some practices even if CMS had not launched CPC+. (The 24 percent of total care management fees that non-Medicare FFS payers provided can be split into approximately 4 percent that was unique for CPC+ and 20 percent that was also provided to non-CPC+ practices.) Many of these payment streams had been established to support practice transformation initiatives begun before CPC+.

In addition to care management fees, CMS and most other payers also provided CPC+ practices with payments to reward performance on utilization of service, cost, and/or quality-of-care measures.

In 2017, CMS and nine other payers also provided Track 2 practices with prospective payments for services that moved away from FFS. Although the remaining payers agreed to implement alternatives to FFS payments by January 2018, most payers reported that they were unlikely to do so by the deadline.

**Practices' perspectives on payment. Some** CPC+ practices, known as "deep-dive practices" were selected for intensive qualitative study. [1] The deep-dive practices reported that enhanced payments were the most critical support for improving primary care in 2017. Most deep-dive practices reported that they used CPC+ care management fees to improve their care delivery, most commonly by hiring new staff such as care managers. However, on the 2018 CPC+ Practice Survey, only 41 percent of Track 1 practices and 51 percent of Track 2 practices indicated that CPC+ funding from Medicare FFS was adequate or more than adequate for them to complete the work required by CPC+. Practices were more concerned about payment levels from non-Medicare FFS payers—only one-third of practices in each track reported that payments from these payers were adequate. Deep-dive practices noted that non-Medicare FFS payers often did not provide additional support unique to CPC+ and that their care management fees were generally lower than practices anticipated.

**Data feedback.** CMS and 90 percent of other payers provided data feedback to practices on utilization of service, quality of care, and/or cost of care. To make data review more streamlined for practices, CMS and the other payers committed to developing a common approach to quality measurement and data feedback. By the end of 2017, payers in three regions—Colorado, Ohio/Northern Kentucky, and Oklahoma—were providing practices with a single report or tool that presented data for Medicare FFS and other payers in the region.

**Practices' perspectives on data feedback.** Although the frequency with which CPC+ practices reviewed data feedback from payers varied, most practices reported that they made at least one change to how they deliver care in 2017 in response to it. Many deep-dive practices indicated that data feedback would be more useful if payers could integrate clinical data with claims data and provide additional support to help practices use the feedback. CPC+ payers reported working to address both of these concerns in 2017.

[1] We conducted site visits to 81 diverse deep-dive practices. We used three to four interview modules with each of these practices, so we have information on each CPC+ function and CPC+ support from approximately 30 practices.

**Learning activities.** CMS and 84 percent of other payers provided learning support to practices. CMS learning activities aimed to (1) provide practices with needed information and resources and (2) promote peer learning among CPC+ practices. CMS learning supports included webinars, a social networking platform, in-person meetings, and tailored one-on-one and small group practice coaching. CMS offered group learning activities to all CPC+ practices, and provided in-person practice coaching to 74 percent of practices in 2017.

**Practices' perspectives on learning activities.** Deep-dive practices reported that CPC+ learning activities provided important guidance to help them understand the CPC+ Comprehensive Primary Care Functions, meet CPC+ requirements, and improve care delivery. Practices noted that learning was most useful when activities provided (1) opportunities to learn from and network with other practices and (2) coaching and other guidance tailored to their type of practice (such as an independently owned practice in a rural setting).

**Health IT support.** At the outset of CPC+, CMS described plans to require Track 2 practices to use enhanced health IT functionality to support their work in later years of CPC+. During the first year, health IT vendors focused on developing new eCQM reporting dashboards for CPC+.[2] Many health IT vendors—including all of the largest vendors—also engaged with practices in both tracks through CPC+-sponsored learning activities to help them use their products to support the five Comprehensive Primary Care Functions.

**Practices' perspectives on health IT support.** Practices had more mixed views of health IT vendor support than of the other supports, reflecting in part that many health IT vendors were still developing or improving health IT functionalities to support the CPC+ Comprehensive Primary Care Functions in 2017. Deep-dive practices that were most satisfied with health IT support indicated their vendors had developed new product enhancements for CPC+ and/or were responsive to questions about their products.

## C. CPC+ practices started changing care delivery in 2017

**Many CPC+ practices focused on risk stratifying patients to identify those who need more intensive care management, hiring and deploying care managers, and integrating behavioral health into primary care in 2017. As expected at the end of Year 1, there is room for practices to make further improvements to care delivery, to achieve the CPC+ Comprehensive Primary Care Functions during the next four years of CPC+.**

**Practices' overall impression of CPC+.** Practices reported they were satisfied with their decision to join CPC+ and already perceived improvements from participating, yet they noted the work is challenging. Nearly all practices (93 percent) reported in the 2018 CPC+ Practice Survey that CPC+ improved quality of care, with 43 percent saying it improved care a lot. Additionally, based on their overall experience with CPC+, 64 percent of practices would be very likely and another 28 percent would be somewhat likely to participate in CPC+ again if given the opportunity. However, many practices found that meeting the care delivery, financial reporting, and health IT requirements was burdensome. Several deep-dive practices reported that staff were

[2] We interviewed a diverse sample of 13 of the 66 health IT vendor partners. These vendors worked with 83 percent of CPC+ practices.

supportive of CPC+ despite any increase in workload it caused, and some said the extra effort was worth the payoff in improved patient care.

**Practices' overall approach to CPC+.** To promote progress on the CPC+ Comprehensive Primary Care Functions, CMS specifies a series of care delivery requirements for practices in each track at the start of each year of CPC+. Practices were encouraged to view these care delivery requirements as a starting point, or minimum requirements, to build on to advance care delivery within each function. In 2017, practices were ramping up and mostly focused on the care delivery requirements.

Although Track 1 and Track 2 practices focused on the same five functions, the Track 2 practices were generally required to complete additional work or transform more deeply for each function. During the first year of CPC+, many practices across both tracks prioritized work on care management (often focusing on risk stratification and hiring and deploying care managers). Even though it was not a requirement for Track 1 practices, practices in both tracks also focused on integrating behavioral health into primary care. Additionally, Track 2 practices reported that they focused on requirements specific to Track 2, such as increasing the use of collaborative care agreements with specialists and assessing patients' psychosocial needs.

**Practices' approach to the CPC+ Comprehensive Primary Care Functions.** We highlight below practices' work in 2017 within each of the five functions. We indicate notable differences by CPC+ track; when we do not mention this kind of variation, the findings reported were similar for practices in Track 1 and Track 2.

**Access and continuity.** CPC+ defines a*ccess to care* as the timely use of needed care, whereas *continuity of care* refers to a continuous relationship between a patient and a team of professionals who provide longitudinal care.

- In 2017, nearly 90 percent of practices reported they had empaneled (that is, assigned each patient to a practitioner and/or care team) at least 95 percent of their active patients. In addition, virtually all practices reported they provided 24/7 access to a care team practitioner with access to the electronic health record (EHR). Although deep-dive practices saw the value in alternative visits (a Track 2 requirement), they had not yet shifted to using them much.

**Care management.** CPC+ uses two approaches to care management. Shorter-term "episodic" care management focuses on acute care events such as emergency department (ED) visits, hospitalizations, and new diagnoses. "Longitudinal" care management is more intensive and relationship based, for patients identified as higher risk who would benefit from ongoing, proactive care management. Care teams in CPC+ work with patients receiving care management to document the patients' goals, preferences, and values in a care plan.

- **Episodic care management.** Deep-dive practices were consistently implementing short-term episodic care management for patients who had recent hospital admissions, ED visits, or a new condition likely to benefit from care management. In line with CPC+ requirements, practices most often identified patients for episodic

care management based on hospital admissions (98 percent of practices), ED visits (92 percent of practices), or presence of a new condition likely to benefit from care management (75 percent of practices). Most deep-dive practices took similar approaches to episodic care management, using follow-up phone calls to check on the patient's condition, provide medication reconciliation, provide education about appropriate ED use, schedule follow-up primary care and specialist appointments, and assist with access to social services as needed.

- **Longitudinal care management.** Almost all practices (97 percent) reported they used a data-driven algorithm as part of their approach to risk stratify patients to identify those who need more intensive, relationship-based longitudinal care management. Common challenges to providing longitudinal care management to high-risk patients that deep-dive practices reported included inadequate numbers of care managers (particularly in independent practices), competing priorities for care managers' time (due to both unclear definitions of care managers' roles and the size of patient caseloads), care manager turnover, and patients' reluctance to engage in care management. As expected in the first year of the initiative, practices were still developing their care management capacity and just over one-third of patients identified as being at the highest risk were under longitudinal care management.

- **Care plans.** Many deep-dive practices in both tracks were not yet systematically using care plans that document and track the needs of—and actions taken to support—patients receiving ongoing care management. There were two reasons for this. First, some practitioners and staff were confused about what a "care plan" is. Second, some were resistant to adopting care plans because they felt the information that would be included in them already existed in other parts of the EHR, or they felt they knew their patients well enough that they did not need a formal care plan.

**Comprehensiveness and coordination.** "Comprehensiveness" refers to a practice meeting the majority of its patients' medical and behavioral health needs in pursuit of each patient's health goals (CMMI 2017). "Coordination" refers to the primary care practice's central role in helping patients and caregivers navigate the health care system, including identifying and communicating with specialists and assisting with care transitions and follow-up after hospital and ED discharges.

- **Comprehensiveness.** Many practices took steps to integrate behavioral health into their practice, typically using a combination of strategies consistent with the Primary Care Behaviorist model.[3] And, while not a requirement, Track 1 practices also pursued behavioral health integration. Practices' ability to integrate behavioral health

[3] CPC Classic and Track 2 practices were required to choose at least one of two strategies for behavioral health integration within the practice: (1) the Primary Care Behaviorist model, where a behavioral health provider (such as a psychologist or clinical social worker) is integrated into the primary care workflow through warm handoffs and co-location, or (2) the Care Management for Mental Illness model, in which the primary care practitioner is the treating provider who works with a care manager (often a nurse trained in behavioral health) and a psychiatrist who supports the care manager, provides decision support, and is linked to this primary care team both telephonically and through the EHR.

care was hampered by the lack of available psychiatrists and behaviorists of all types in many regions.

Track 2 practices were also required to work on addressing patients' social needs. In 2017, 67 percent of Track 2 practices reported that they incorporated screenings for social needs (such as housing, food insecurity, and transportation) into their EHR, but several Track 2 deep-dive practices felt their EHR lacked the functionality to support tracking that information over time. Additionally, most CPC+ practices reported that they maintained or had access to an inventory of social services resources.

- **Care coordination.** Almost three-quarters of CPC+ practices are using collaborative care agreements (plans that set expectations about roles and information sharing between providers across settings) to support coordination of care with some specialists. Some deep-dive practices reported adding new staff in 2017 to help manage specialist referrals, tracking, and follow-up. However, most deep-dive practices had not used payer reports on high-volume, high-cost specialists to alter their referral decisions, preferring to use practitioners' judgment and experience to guide their decisions.

**Patient and caregiver engagement.** CPC+ encourages patient and caregiver engagement in health care delivery by requiring practices to involve patients and caregivers in efforts to guide practice improvement and to integrate self-management support into usual care. *Patient and caregiver involvement in practice improvement* aims to draw on the experience and expertise of patients and their caregivers to identify the strengths of practices, offer insights on areas for improvement, and provide ideas for solutions. *Self-management support* aims to enhance patients' willingness and ability to manage their own health care.

- Nearly all practices tried to elicit input directly from patients who receive care at the practice, their family members, and/or caregivers by establishing a Patient and Family Advisory Council (PFAC), and most deep-dive practices reported that they made changes in response to patient and caregiver feedback from PFACs, patient surveys, or other sources. Only a few deep-dive practices reported that they had assessed the practice's capabilities and plan for self-management support, although many practices reported that they were taking various steps to provide this kind of support.

**Planned care and population health.** Planned care and population health refers to organizing care delivery to meet the needs of the practice's entire patient population.

- Nearly all deep-dive practices used payer feedback and eCQM data to (1) improve quality at the point of care for individual patients and (2) identify opportunities for improving existing services at the practice. Consistent with it being a requirement for them, Track 2 deep-dive practices also reported that in 2017 they focused more on using data during care team meetings to guide the testing of tactics to improve care than they did before CPC+, although several practices thought the CMS requirement that these meetings occur weekly was burdensome.

### Factors influencing CPC+ implementation

- **Supporting implementation.** Many deep-dive practices benefited from the alignment between CPC+ and other transformation efforts such as PCMH programs. Practices that were using health IT with robust features and functions to support administrative tasks, clinical care, quality improvement (QI), and population health efforts also had an easier time implementing CPC+ requirements, as did practices that had someone who championed CPC+ and a culture that embraced the model. Finally, because they tended to have greater access to resources that supported CPC+ implementation—such as staffing for care management and behavioral health integration, data analytics capabilities, and health IT and QI resources—many system-owned practices faced fewer struggles than independent practices in identifying resources for implementing care delivery requirements. In deploying these resources, many systems adopted a standardized approach to CPC+ implementation, which helped ensure consistency in care delivery but limited practices' autonomy to define changes for individual sites.

- **Hindering implementation.** As with any new effort, practices also encountered challenges to changing care delivery across the five functions. For example, some deep-dive practices struggled with some of the care delivery requirements in the first year of CPC+ because they either did not understand them (care plans, for example), or felt that some requirements (such as risk-stratification algorithms, and for some practices, care plans) forced a "one-size-fits-all" approach to care that interfered with clinical judgment and did not enhance quality of care. Practices without robust health IT functionalities faced challenges implementing some elements of the CPC+ Comprehensive Primary Care Functions, particularly risk stratification, creating care plans and sharing them across primary care team members, and reporting eCQMs. Additionally, a few independently owned deep-dive practices noted they did not have the resources to update the EHR as needed, so they had to use manual processes, for example, to track gaps in care. Practices with limited ability to exchange data across settings experienced challenges communicating with specialists and hospitals outside of their own organization. Finally, both system-owned and independent practices reported that the financial incentives of specialists and hospitals from FFS payment are barriers to CPC+ practice efforts to reduce total patient costs, which affected their efforts to reduce hospital and ED admissions and to limit nonessential referrals to specialists.

## D. As expected, CPC+ had few favorable effects on Medicare FFS beneficiaries in 2017

**Primary care transformation takes time; therefore, as expected, CPC+ had minimal effects on Medicare FFS beneficiaries in 2017. There were few, very small differences in service use and quality-of-care outcomes or total Medicare FFS expenditures without enhanced CPC+ payments. When including Medicare enhanced payments for FFS beneficiaries, expenditures were 2 to 3 percent higher for CPC+ than for comparison practices.[4]**

[4] These enhanced payments include CMS' CPC+ care management fees for Medicare FFS beneficiaries as well as CMS' payments for rewarding performance: (1) prospectively paid and retrospectively reconciled performance-based payments for practices not participating in the Medicare Shared Savings Program; and (2) shared savings payments to accountable care organizations for practices participating in SSP.

- In each track, beneficiaries served by CPC+ practices experienced slightly greater reductions in outpatient ED visits (1.2 to 1.6 percent), slightly slower rates of growth in primary care ambulatory visits (1.6 to 1.8 percent), and slightly larger improvements in claims-based quality-of-care measures for recommended services for patients with diabetes and for breast cancer screening (one percentage point or less), than beneficiaries served by comparison practices. CPC+ had no statistically significant effects on acute hospitalizations, ambulatory visits to specialists, 30-day readmissions, or the proportions of beneficiaries who had hospice use or an advance care plan visit, or who had died.
- CPC+ did not affect total Medicare expenditures without enhanced CPC+ payments in 2017. After including CMS' enhanced CPC+ payments, and shared savings payments for practices that participate in the Medicare Shared Savings Program (SSP), Medicare expenditures for beneficiaries in CPC+ practices were 2 to 3 percent higher than those for beneficiaries in comparison practices. This is similar in size to the average care management fees practices received for Medicare FFS beneficiaries.
- These findings are consistent across Tracks 1 and 2 of CPC+ and generally across subgroups of beneficiaries and practices, including practices that were and were not participating in SSP.
- Because these findings reflect only one year of the intervention, it is too early to determine the ultimate effects of CPC+.

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# 1. INTRODUCTION

## 1.1. Overview of Comprehensive Primary Care Plus

Comprehensive Primary Care Plus (CPC+) is the largest and most ambitious payment and delivery reform ever tested in primary care in the United States. The Center for Medicare & Medicaid Innovation (CMMI) of the Centers for Medicare & Medicaid Services (CMS) launched CPC+ in January 2017 (Sessums et al. 2016). This chapter provides an overview of CPC+ and the independent evaluation.

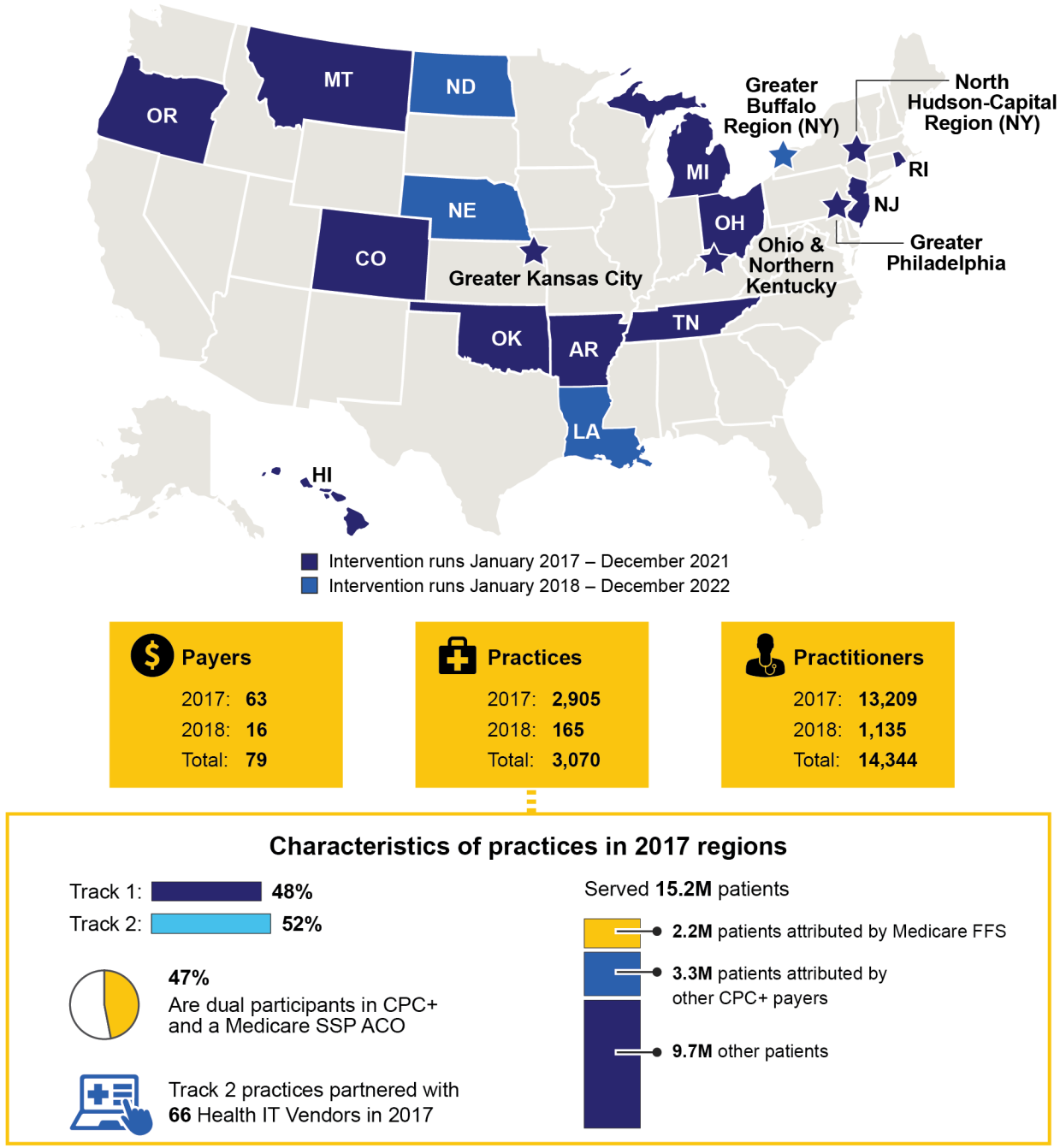
Through CPC+, CMS is testing the idea that, with multipayer payment reform and support, primary care practices will be able to transform how they deliver care, and improve access to and quality and efficiency of primary care, which ultimately is intended to achieve better health outcomes at lower cost. This is expected to improve outcomes for patients. CPC+ builds on the promising experience and lessons learned from the CPC initiative (known as "CPC Classic"), a four-year intervention that began in fall 2012 and concluded at the end of 2016 (Dale et al. 2016; Peikes et al. 2018a, 2018b, 2018c).

In conjunction with public and private payers, CMS kicked off CPC+ in a diverse set of 14 regions across the United States in January 2017 and rolled it out to 4 more regions in January 2018 (Figure 1.1). Across the 18 CPC+ regions, CMS invited a total of 79 payers to participate in the model, in addition to Medicare fee-for-service (FFS).[5] These payers came together to support a total of 3,070 practices, 2,905 that started in in 2017 and 165 that started in 2018. Both cohorts of practices will participate in CPC+ for five years. (See Chapter 2 for a detailed description of who joined CPC+.)

As indicated in the CPC+ conceptual model (Figure 1.2), CPC+ practices are expected to use advanced approaches to delivering primary care across five Comprehensive Primary Care Functions: (1) access and continuity, (2) care management, (3) comprehensiveness and coordination, (4) patient and caregiver engagement, and (5) planned care and population health. CMS considers these functions to be primary drivers to improve access to and quality and efficiency of primary care, which ultimately is intended to achieve better health outcomes at lower cost. Each year, CMS specifies a set of care delivery requirements, which are minimum requirements needed to achieve these functions, and incremental stepping stones toward achieving these five functions. (See Table 1.1 for the care delivery requirements for CPC+ Year 1 and Chapter 4 for a detailed description of how practices approached CPC+ care delivery in 2017.)

[5] Payers are counted separately for each region in which they partnered because some payers that partner in multiple regions vary their approach to CPC+ across regions.

**Figure 1.1. Regions, payers, and practices selected to participate in CPC+**

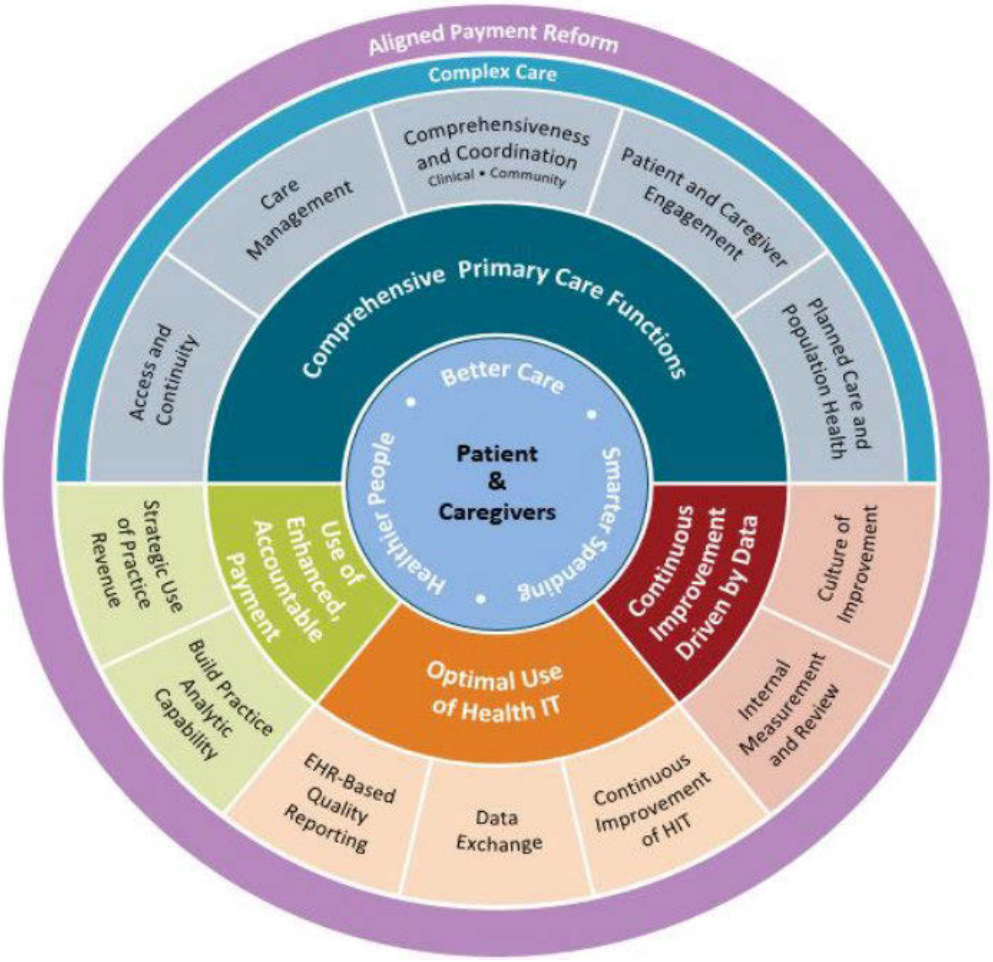



Sources: Mathematica's analysis of 2017 practice-reported data submitted to CMS, and 2017 and 2018 practice and payer rosters collected by CMS.

Note: CMS and other payers attributed patients to CPC+ practices for payment purposes. Other patients included patients covered by CPC+ payers but not attributed to a practice, patients covered by payers not partnering in CPC+, and uninsured patients.

ACO = accountable care organization; SSP = Medicare Shared Savings Program.

**Figure 1.2. CPC+ conceptual model**




Source: Center for Medicare & Medicaid Innovation. "Comprehensive Primary Care Plus: Advancing the Delivery of and Payment for Primary Care. Information for Payers." (n.d.). Available at https://innovation.cms.gov/Files/slides/cpcplus-payeroverview-slides.pdf.

CMS provided an implementation guide that described each of the functions and requirements in detail, and included links to evidence-based tools, templates, and articles to give practices examples they could model. However, practices had flexibility to decide how to implement the five functions and associated care delivery requirements. For example, practices could decide which care delivery requirements to implement first, which staff should be involved, and how to monitor change.

CPC+ practices are split into two practice tracks: Track 1 (48 percent of practices that started in 2017) and Track 2 (52 percent of practices that started in 2017). Track 2 has more focus on complex patients, and as a result, has more financial support, a greater shift from FFS toward population-based payment, more advanced care delivery requirements and, starting in the second year of CPC+, includes specific requirements to use health information technology (IT)

to support improved care,[6] than Track 1.[7] Practices chose which track to apply to based on their interest, capabilities, and stage of transformation. In some cases, CMS decided which track was most appropriate when it accepted practices into CPC+. Practices will remain in their initial track throughout CPC+.

**Table 1.1. Comprehensive Primary Care Functions and care delivery requirements in the first year of CPC+, by CPC+ track**

| Function | Track 1 care delivery requirements | Track 2 care delivery requirements |
|---|---|---|
|  **1. Access and Continuity** | 1.1. Achieve and maintain at least 95 percent of active patients[a] empaneled to a practitioner[b] and/or care team.<br>1.2. Ensure that patients have 24/7 access to a care team practitioner with real-time access to the electronic health record (EHR).<br>1.3. Organize care by practice-identified teams responsible for a specific, identifiable panel of patients to optimize continuity. | Track 1 Requirements 1.1–1.3, plus:<br>1.4. Regularly offer at least one alternative to traditional office visits to increase access to care team and practitioners in a way that best meets the needs of the population, such as eVisits, phone visits, group visits, home visits, alternate location visits (for example, senior centers and assisted living centers), and/or expanded hours in early mornings, evenings, and weekends. |
|  **2. Care Management** | 2.1. Risk stratify all empaneled patients.<br>2.2. Provide targeted, proactive, relationship-based (longitudinal) care management to all patients who are identified as at increased risk, based on a defined risk-stratification process, and who are likely to benefit from intensive care management.<br>2.3. Provide short-term (episodic) care management along with medication reconciliation to a high and increasing percentage of empaneled patients who have an emergency department (ED) visit or hospital admission/discharge/transfer and who are likely to benefit from care management.<br>2.4. Ensure that patients with ED visits receive a follow-up interaction within one week of discharge.<br>2.5. Contact at least 75 percent of patients who were hospitalized in target hospitals within two business days. | 2.1. Use a two-step risk-stratification process for all empaneled patients:<br>Step 1 is based on defined diagnoses, claims, or another algorithm (not care team intuition).<br>Step 2 adds the care team's perception of risk to adjust patients' risk stratification, as needed.<br>Track 1 Requirements 2.2–2.5, plus:<br>2.6. Use a plan of care centered on the patient's actions and support needs in management of chronic conditions for patients receiving longitudinal care management. |

[6] CMS required all CPC+ practices to use certified health IT by January 1, 2017, and to report electronic clinical quality measures (eCQMs) by January 1, 2018. Additionally, Track 2 practices are required to use health IT to support some care delivery requirements.

[7] Track 1 practices that previously participated in CPC Classic had slightly more intensive care delivery requirements in 2017 than other practices in Track 1. The additional requirements for CPC Classic practices are described in Table 1.1.

**Table 1.1.** ***(continued)***

| Function | Track 1 care delivery requirements | Track 2 care delivery requirements |
|---|---|---|
|  **3. Comprehensiveness and Coordination** | 3.1. Systematically identify high-volume and/or high-cost specialists serving the patient population using CMS or other payer's data.<br>3.2. Identify hospitals and EDs responsible for most patients' hospitalizations and ED visits, and assess and improve timeliness of notification and information transfer using CMS or other payer's data.<br>Track 1 Classic[c]: also Track 2 requirements 3.3 and 3.4. | Track 1 Requirements 3.1–3.2, plus:<br>3.3. Enact collaborative care agreements with at least two groups of specialists identified based on analysis of CMS or other payer reports.<br>3.4. Choose and implement at least one option from a menu of options for integrating behavioral health into care.<br>3.5. Systematically assess patients' psychosocial needs using evidence-based tools.<br>3.6. Conduct an inventory of resources and supports to meet patients' psychosocial needs.<br>3.7. Characterize important needs of subpopulations of high-risk patients, and identify a practice capability to develop that will meet those needs and can be tracked over time. |
|  **4. Patient and Caregiver Engagement** | 4.1. Convene a Patient and Family Advisory Council (PFAC) at least once in the first intervention year, and integrate recommendations into care, as appropriate.<br>4.2. Assess practice capability and plan for support of patients' self-management.<br>Track 1 Classic: also Track 2 requirements 4.1 and 4.2. | 4.1. Convene a PFAC in at least two quarters in the first intervention year and integrate recommendations into care, as appropriate.<br>4.2. Implement self-management support for at least three high-risk conditions. |
|  **5. Planned Care and Population Health** | 5.1. Use feedback reports provided by CMS or other payers at least quarterly on at least two utilization measures at the practice level and practice data on at least three electronic clinical quality measures (eCQMs, derived from the EHR) at both the practice and panel levels to inform strategies to improve population health management. | Track 1 Requirement 5.1, plus:<br>5.2. Conduct care team meetings at least weekly to review practice- and panel-level data from payers and internal monitoring and use these data to guide testing of tactics to improve care and achieve practice goals in CPC+. |

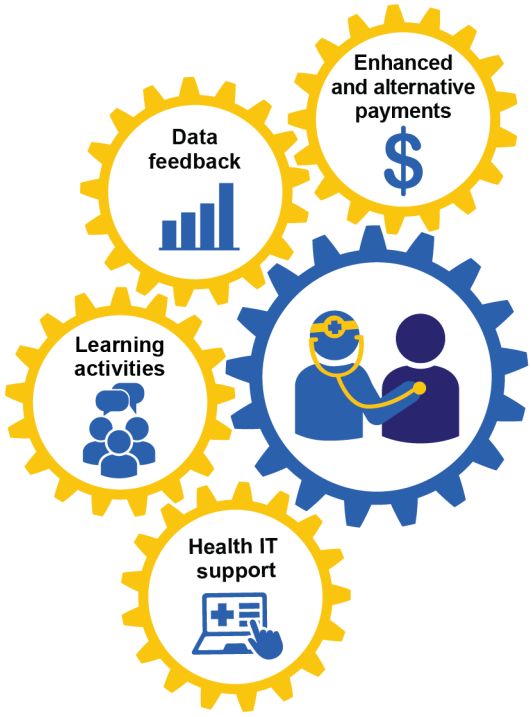
Source: Center for Medicare & Medicaid Innovation. "CPC+ Care Delivery Requirements." 2017. Available at https://innovation.cms.gov/Files/x/cpcplus-practicecaredlvreqs.pdf.

[a] Active patients refers to patients who received primary care at the practice during a defined look-back period, usually the prior 18 to 36 months.

[b] Practitioners include physicians, nurse practitioners, physician assistants, and clinical nurse specialists.

[c] CPC Classic practices participating in Track 1 are expected to build on their CPC Classic work, as reflected in CMS' requirement that Track 1 CPC Classic practices satisfy some of the additional Track 2 requirements.

To support practice transformation, CPC+ provides practices with enhanced and alternative payments, data feedback, learning activities, and health IT supports. (See Chapter 3 for a detailed description of the supports provided to practices by CMS, CPC+ payer partners, and health IT vendors.)




**Enhanced and alternative payments.** Payment redesign by both public and private payers is expected to give primary care practices greater resources and flexibility to deliver high quality, whole-person, patient-centered care and reduce the use of unnecessary services that drive total cost of care. Specifically, CMS and other CPC+ payers agreed to provide three types of payments to CPC+ practices:

1. Enhanced payments for CPC+ participation *in addition to usual payments for services* to allow practices to furnish care consistent with the CPC+ functions;
2. Payments that reward practices for improving quality and/or reducing cost or utilization; and
3. For Track 2 practices (and other practices if payer partners decide to also include them), payments for primary care that shift away from FFS toward prospective, non-visit-based payments in lieu of all or some portion of FFS payments.

CMS and the other CPC+ payers use a variety of payment approaches to meet these aims.

**Data feedback.** CMS and its payer partners also committed to providing practices with data feedback to help them better manage population health and support continuous quality improvement. All payers committed to providing practices with data about utilization of services and/or total cost of care at least quarterly; some non-Medicare FFS payers also provide practices with quality data. Additionally, CMS and the other payers committed to developing a common approach to quality measurement and data feedback so that practices can receive streamlined and actionable information.

**Learning activities.** CMS has contracted with organizations to provide a National Learning Team and a Regional Learning Network, which disseminate information and organize opportunities for collaboration and learning among participating practices, payers, and health IT vendors. These organizations are providing a range of learning supports to practices, including peer-to-peer learning opportunities, webinars, a social networking platform, in-person regional and national meetings, and—for practices identified as needing additional support to meet CPC+ requirements—one-on-one practice coaching.

**Health IT support.** Practices also receive support from health IT vendors. As noted above, starting in the second year of CPC+, care delivery requirements for Track 2 practices include the use of health IT to support comprehensive primary care. As an example, Track 2 practices are required to use health IT to risk stratify their practice site patient population and identify and flag patients with complex needs (see Chapter 3 for detail on CPC+ health IT requirements). When Track 2 practices applied for CPC+, they had to partner with one or more health IT vendors that committed to providing existing functionalities and/or developing new functionalities needed to meet CPC+ health IT requirements. Although Track 2 practices have more intensive health IT requirements, health IT vendor partners support practices in both tracks through their participation in CPC+ learning activities. In the first year of CPC+, 66 distinct health IT vendors partnered with Track 2 CPC+ practices.

### Closer look: How does CPC+ build on CPC Classic?

- CPC+ increases the number of regions and practices selected to participate from 7 regions and 502 practices in CPC Classic to 18 regions and 3,070 practices in CPC+.
- CPC+ specifies two (rather than one) practice tracks to reflect variations in practices' experience with and readiness for transformation.
- CPC+ places a greater emphasis on comprehensiveness of care by:
  - Introducing more care delivery requirements related to comprehensiveness of care. For example, CPC+ more explicitly focuses on behavioral health integration to better address patients' mental health and substance abuse conditions.
  - Introducing a new payment methodology for Track 2 practices. Under the CPC+ approach, CMS is reducing FFS payments for selected services and adding a prospective payment for those services. The prospective payment is based on a practice's average historical payments and then increased by 10 percent to support more comprehensive management and coordination of medical and behavioral health care and social services.
- CPC+ more explicitly acknowledges the integration of health IT as a support for practice change by involving health IT vendors and requiring Track 2 practices to use health IT to meet care delivery requirements.
- Based on stakeholder feedback, CMS decided to allow dual participation of practices in CPC+ and the Medicare Shared Savings Program (SSP). This change recognizes that many practices were interested in participating in both practice transformation efforts, and allows CMS to test the effects of comprehensive primary care within an accountable care organization, where all providers face incentives to generate savings.
- CPC+ uses a new payment approach that is expected to give practices a stronger incentive to improve outcomes. Specifically, for CPC+, CMS replaced the regional, retrospective shared savings incentive approach used in CPC Classic with a practice-level, performance-based bonus payment that is paid prospectively and then reconciled based on each practice's performance on cost and quality measures. (CPC+ practices participating in SSP are eligible for performance bonuses through that program and do not receive these prospective performance-based incentive payments.)

## 1.2. Design of the independent evaluation of CPC+

CPC+ will test primary care payment and delivery reforms on an unprecedented scale. A rigorous evaluation of CPC+ is critical to understanding its implementation and impacts on Medicare FFS (and, where possible, Medicaid FFS) utilization, costs, and quality, and on patient and practitioner experience. The goal of the evaluation is to answer the following research questions:

- Which regions, payers, practices, and health IT vendors joined CPC+? Why did they join? What characteristics distinguish them? What types of patients did CPC+ practices serve?
- What payment, data feedback, learning activities, and health IT support did CMS, CPC+ payer partners, and health IT vendors provide? How did practices use these supports?
- How did practices change the way they delivered care, and what facilitated or impeded progress?
- What were the effects on practitioner experience; patient experience; and quality, service use, and costs for attributed Medicare FFS beneficiaries and (where feasible) Medicaid FFS beneficiaries?
- What factors account for the varying degrees of success in achieving the goals of the initiative, or the speed with which participants reached these goals?
- To what extent will practices, health systems, payers, and health IT vendors sustain CPC+ after it ends? How is the model spreading to stakeholders that were not involved in CPC+?

The evaluation is relying on a range of quantitative and qualitative data sources to address these research questions. (Table 1.2 describes our current plans, which may be refined as the intervention unfolds.) As indicated in Table 1.2, the first annual report draws on data that were available for analysis as of August 2018. Future reports will continue to draw on these data sources as well as incorporate findings from other data sources.

We are using rigorous analysis techniques. These include, as appropriate, weighting survey responses to account for sampling, survey nonresponse, and matching, as well as using a trained team of qualitative researchers to collect data and code interview transcripts. To estimate the impact of CPC+, we are comparing patient outcomes over time for CPC+ practices relative to those of similar matched comparison practices.

For both our implementation and impact analyses, we are reporting findings by CPC+ track, and separately for practices that participate in the Medicare Shared Savings Program in addition to CPC+ and those that participate in CPC+ only. Additionally, we are reporting findings for subgroups of practices (such as those that are owned by a health system or hospital, or are in rural locations) and beneficiaries (such as those who are high risk).

## Table 1.2. CPC+ evaluation data sources

| Data source | Description | Included in first annual report? |
|---|---|---|
| **CMS and its contractors** | | |
| Interviews with CMS and its contractors | Interviews with staff at CMS and its contractors responsible for implementing CPC+. These interviews provide insight into the payment, data feedback, and learning supports that CMS and its contractors provide to CPC+ practices and the barriers and facilitators to providing those supports. Interviews occur annually. | ✓ |
| Data on CMS payments for CPC+ | Data on CPC+ payments are used to understand the level of enhanced and alternative CPC+ payments that practices receive for Medicare FFS beneficiaries. | ✓ |
| CPC+ program documentation | Program documentation from CMS includes samples of CPC+ data feedback for Medicare FFS beneficiaries, detailed information on CPC+ learning activities, and data on which practices downloaded data feedback and participated in group learning sessions or were selected to receive one-on-one coaching. | ✓ |
| Observations of learning activities | Observations of CPC+ learning activities provide insight into how those activities are structured. | ✓ |
| **CPC+ payer and health IT vendor partners** | | |
| Payer surveys | CMS and Mathematica each field a survey annually to all participating CPC+ payers. To reduce respondent burden, CMS and Mathematica coordinate on survey content and, with payers' permission, share data with each other. Taken together, the surveys cover CPC+ participation, patient attribution, and the payment, data feedback, and learning supports payers provide to CPC+ and non-CPC+ practices. | ✓ |
| Interviews with CPC+ payer partners | Interviews conducted with CPC+ payers to understand their CPC+ design decisions, the barriers and facilitators they face supporting CPC+ practices, and their perspectives on CPC+. Interviews are conducted in the first, third, and final years of a payer's participation in CPC+. | ✓ |
| Review of payer partner data feedback | Reviewing data feedback provided by payers to CPC+ practices informs our understanding of the content and structure of those reports. | ✓ |
| Interviews with payer partners' contractors | Interviews conducted with organizations hired by CPC+ payer partners to convene regional CPC+ meetings or to aggregate data feedback for CPC+ practices provide insight into how CPC+ payer partners coordinate support for practices. | ✓ |
| Interviews with health IT vendors | Interviews with health IT vendors to understand how they are developing new CPC+ health IT functionalities or supporting practices in using existing functionalities, and any barriers or facilitators to doing so. Interviews with up to 15 health IT vendors will occur in 2017, 2019, and 2021. | ✓ |
| Interviews with exiting and nonparticipating payers and vendors | Interviews with a sample of payers and health IT vendors that decided not to join CPC+ or that withdrew provide perspectives on their reasons for not joining and any alternative plans for supporting primary care practices. | ✓ |
| **CPC+ practices** | | |
| Practice application data | Information from practice applications provided a baseline understanding of CPC+ practice characteristics. | ✓ |
| Practice tracking data | Monthly practice tracking data from CMS and its contractors indicate changes in practice participation (such as withdrawals) and practitioner participation. | ✓ |
| Practice survey | The practice survey includes a modified Patient-Centered Medical Home Assessment (M2-PCMH-A) tool, which Mathematica adapted for the CPC+ evaluation to capture approaches to care delivery. The survey also asks practices about staffing, practice revenues, use of health IT and data feedback, and their experiences with and perspectives on CPC+. The survey is fielded annually to all CPC+ practices and we are considering fielding it at three points in time to comparison practices. | ✓ |

**Table 1.2.** ***(continued)***

| Data source | Description | Included in first annual report? |
|---|---|---|
| Practitioner survey | The practitioner survey is fielded to a sample of primary care physicians, nurse practitioners, and physician assistants in CPC+ practices that started in 2017 and their comparison practices.[a] The survey will assess practitioners' experiences delivering primary care and experiences with CPC+. The survey will be fielded in 2019 and 2021. | |
| Early experience calls | Interviews to understand practices' early perspectives on CPC+ to inform program refinements. Interviews were conducted approximately nine months after they joined CPC+ with 14 practices that began in 2017 and 8 that began in 2018. | ✓ |
| Interviews and observations of deep-dive practices | Qualitative data collected annually from up to 93 practices, proportionally split across CPC+ tracks. Respondents include a practice practitioner lead, other practitioners, CPC+ project coordinators, care managers, practice managers, health IT staff, and, when relevant, health system-level representatives. These data provide information on how practices implemented changes related to each CPC+ function, associated barriers and facilitators to this implementation, and experiences with CPC+. Site visits or telephone interviews will be conducted with practices in their first through fourth years of CPC+. | ✓ |
| Site visits to exemplar practices | Site visits to "exemplar" practices that have improved patient outcomes substantially will identify factors that may be associated with those improvements. We will interview exemplar practices that substantially reduced hospitalization rates or emergency department utilization. Site visits will be conducted with up to 22 practices in 2019 and up to 50 practices in 2021. | |
| Interviews with exiting practices | Interviews with a sample of exiting practices provide perspectives on their reasons for withdrawal or termination and their future plans to improve primary care delivery. | ✓ |
| Practice-reported financial data | CPC+ practices' self-reported financial data to CMS provide insight into the magnitude of payments CPC+ payer partners (non-Medicare FFS payers) make to CPC+ practices. | ✓ |
| CPC+ care delivery reporting data | Each quarter, CPC+ practices submit data on how they approached the CPC+ care delivery requirements to CMS. | ✓ |
| Electronic clinical quality measures (eCQMs) | CPC+ practices submit eCQM data annually for yearlong performance periods. We will use these data (1) to assess how well the practices meet the CPC+ quality reporting requirements each year, and (2) to track improvements over time in quality of care. | |
| Performance alerts and notices of remedial action | CMS issues performance alerts and notices of remedial action to practices that are having trouble completing CPC+ requirements. We use that information to identify areas in which practices struggle and the characteristics of struggling practices. | ✓ |
| **CPC+ patients** | | |
| Beneficiary survey | The survey will assess Medicare FFS beneficiaries' experiences with and satisfaction with care. It will be fielded annually to beneficiaries attributed to CPC+ practices that started in 2017 and their comparison practices.[a] | |
| Interviews with beneficiaries | Telephone interviews with Medicare FFS beneficiaries who received care from deep-dive practices. Interview topics are to be determined. We will conduct interviews with two waves of up to 40 beneficiaries each, one in 2019 and one in 2021. | |

**Table 1.2.** ***(continued)***

| Data source | Description | Included in first annual report? |
|---|---|---|
| **Claims and enrollment data** | | |
| Medicare FFS | For all regions combined, Medicare FFS claims data are used to estimate the impact of CPC+ on costs, utilization, and quality of care for Medicare FFS beneficiaries. | ✓ |
| Medicaid FFS | In regions where analysis is feasible, Medicaid FFS claims data will be used to estimate the impact of CPC+ on costs, utilization, and quality of care for Medicaid FFS beneficiaries. | |

Note: The first annual report draws on data that were available for analysis as of August 2018. Future reports will continue to draw on these data sources and will also incorporate findings from other data sources. Data sources included in the first annual report are indicated with a check mark in the table.

[a] The CPC+ practitioner and beneficiary surveys are only fielded to practitioners in or beneficiaries in CPC+ practices that started in 2017. Given that only 5 percent of practices started in 2018, CMS and Mathematica decided the cost and respondent burden that would be incurred by fielding these surveys to 2018 Starters outweigh the benefits of doing so. Mathematica will field the practice survey to and collect qualitative data from practices that started in 2017 and 2018.

## 1.3. Road map to this report

This report provides a *detailed* look at the first year of CPC+ for practices that started CPC+ in 2017 and their Medicare FFS beneficiaries. In Chapter 2 of this report, we describe the number and characteristics of the regions, payers, practices, patients, and health IT vendors that were involved in CPC+ in 2017. In Chapter 3, we describe the payment, data feedback, learning, and health IT supports provided to CPC+ practices in 2017 by CMS, payer partners, and health IT vendors. In Chapter 4, we detail how practices that started CPC+ in 2017 changed the way they deliver care over the first year and the factors that facilitated or hindered their efforts. In Chapter 5, we report estimates of the impact of CPC+ during 2017 on a wide array of claims-based outcomes for Medicare FFS beneficiaries served by these practices, including costs, service use, and claims-based quality of care. The appendices to this report are in a separate volume and provide further information (Peikes et al. 2019b). Our main report focuses on the key findings from the first year of our evaluation (Peikes et al. 2019a).

Subsequent annual reports will include additional results for practices that began in 2017 and in 2018, and additional analyses, such as the effects on electronic clinical quality measures and patient and practitioner experience.

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# 2. WHO JOINED CPC+ IN 2017?

In 2017, CMS partnered with 63 payers to launch CPC+ in 14 regions across the United States. In 2018, CMS added four regions, and partnered with another 16 payers—8 in the regions that began in 2017 and 8 in the regions that began in 2018. In this chapter, we describe who joined CPC+ in 2017. The analyses in this chapter draw on program data, Medicare enrollment and claims data, surveys, and qualitative interviews.

Over 2,900 primary care practices began participating in CPC+ at the start of 2017. These practices included 13,209 primary care practitioners and together served over 15 million patients, which included 2.2 million attributed Medicare fee-for-service (FFS) beneficiaries, 3.3 million patients attributed to other payer partners, and 9.7 other nonattributed patients. Throughout 2017, CPC+ participation remained relatively stable.

The regions and practices participating in CPC+ are diverse, which should enable CPC+ to generate important lessons for the future of primary care nationwide. The regions vary in terms of rurality, socioeconomic status, and geography. Like the regions, participating practices are diverse; they span small to large practice size; are located in urban, rural, and suburban areas; and serve Medicare beneficiaries of all Hierarchical Condition Category (HCC) scores, indicating a range of predicted healthcare costs. CPC+ practices are slightly more likely to have Patient-Centered Medical Home (PCMH) recognition or have participated in a prior primary care transformation initiative, be owned by a health system or hospital, and be larger than other practices in their region.

Track 2 practices partnered with one or more of 66 health IT vendors that committed to providing required functionalities and supporting practices in their use. The five largest participating health IT vendors served approximately 80 percent of Track 2 practices, while two-thirds of the 66 participating vendors partnered with fewer than 10 Track 2 practices each.

In Sections 2.1 and 2.2 of this chapter, we provide an overview of key findings on who joined CPC+ in 2017 and highlight our methods. In Section 2.3, we describe how CPC+ stakeholders became engaged in CPC+ in 2017 and 2018, including describing the CPC+ payer solicitation and CPC+ practice application processes. We also provide details about the numbers and characteristics of the stakeholders that joined in 2017, and (if relevant) how their participation changed during 2017. In Sections 2.4 to 2.7, we focus these analyses on the payers, practices, patients, and health IT vendors in the 14 regions that began CPC+ in 2017. We do so because subsequent chapters of this report examine the implementation and impacts of CPC+ for the practices that began in 2017 and the Medicare FFS beneficiaries they serve.

## 2.1. Key takeaways on CPC+ participation

### Payers

- Since its launch in January 2017, 79 payers have partnered in CPC+. [8] In January 2017, 63 payers partnered in CPC+ (Figure 2.1). In January 2018, 16 additional payers became partners—8 payers joined in the regions that started in 2017, and 8 joined in the regions that started in 2018. Across all regions joining CPC+ in 2017, the number of payers selected to partner per region (not including Medicare) ranged from one payer each in Hawaii and Greater Kansas City, to 14 payers in Oregon.
- Payers that partnered with CMS included various lines of business in CPC+, most commonly commercial and Medicaid managed care. In addition to fully insured lines of business, 33 payers had self-insured clients, and 16 of them provided CPC+ payments to practices for at least some of these clients.
- Payers varied in the number of patients they attributed to CPC+. The median number of attributed lives for payers in 2017 was just over 20,000 attributed patients. The six largest CPC+ payers each attributed more than 200,000 patients to CPC+ practices. Together, these six payers accounted for 52 percent of all CPC+ lives attributed by non-Medicare FFS payers.
- In 2017, two small regional payers—both of which had few attributed lives in CPC+—withdrew. During exit interviews with the evaluators, they reported reasons for withdrawal that were mostly unrelated to CPC+ and primarily related to payers' internal organizational strategy or financial pressures.

### Practices

- More than 3,000 practices joined CPC+—2,905 practices in the 14 regions that joined in January 2017, and an additional 165 practices in the 4 regions that joined in January 2018. These practices were approximately evenly split between Tracks 1 and 2 and Medicare Shared Savings Program (SSP) status, meaning that approximately half of practices were in each track, and approximately half of practices were participating in the Medicare SSP.
- CPC+ practices are diverse. Their sizes range from small to large, with an average of 4.8 primary care practitioners per practice. They are located in urban, rural, and suburban areas. They serve Medicare beneficiaries of all HCC scores, indicating a range of predicted healthcare costs. And they may be owned either by physicians, hospitals, or health care systems.

[8] We count non-Medicare FFS payers separately for each region in which they have a partnership, because some payers that partner in multiple regions vary their approach to CPC+ across regions.

- Before CPC+ began, compared with other primary care practices in their regions, CPC+ practices were more likely on average to:
  - Have PCMH recognition;
  - Have participated in prior primary care transformation initiatives, including CMS' Transforming Clinical Practices Initiative (TCPI) and Multi-payer Advanced Primary Care Practice (MAPCP) Demonstration, in addition to CPC Classic, the predecessor to CPC+;
  - Be participating in Medicare SSP;
  - Have a practitioner who met meaningful use criteria for health IT use; and
  - Be larger and/or owned by a health system or hospital.
- By December 2017, 2,786 (96 percent) of the 2,905 practices that joined in January 2017 were still participating in CPC+. Of the 119 practices (4 percent) that stopped participating:
  - Fifty practices (42 percent) left CPC+ due to organizational changes (14 closed, and 36 merged with other CPC+ practices).
  - Fifty-nine practices (50 percent) voluntarily withdrew from CPC+, most commonly due to insufficient resources to continue participation (33 practices), followed by participation in a separate CMS program that precluded the practice's continued participation in CPC+ (11 practices).
  - Ten practices (8 percent) were terminated by CMS for non-compliance with care delivery or health IT requirements.
- A total of 13,404 practitioners across the 2,786 practices were participating in CPC+ at the end of December 2017. The median number of CPC+ practitioners per practice was four.

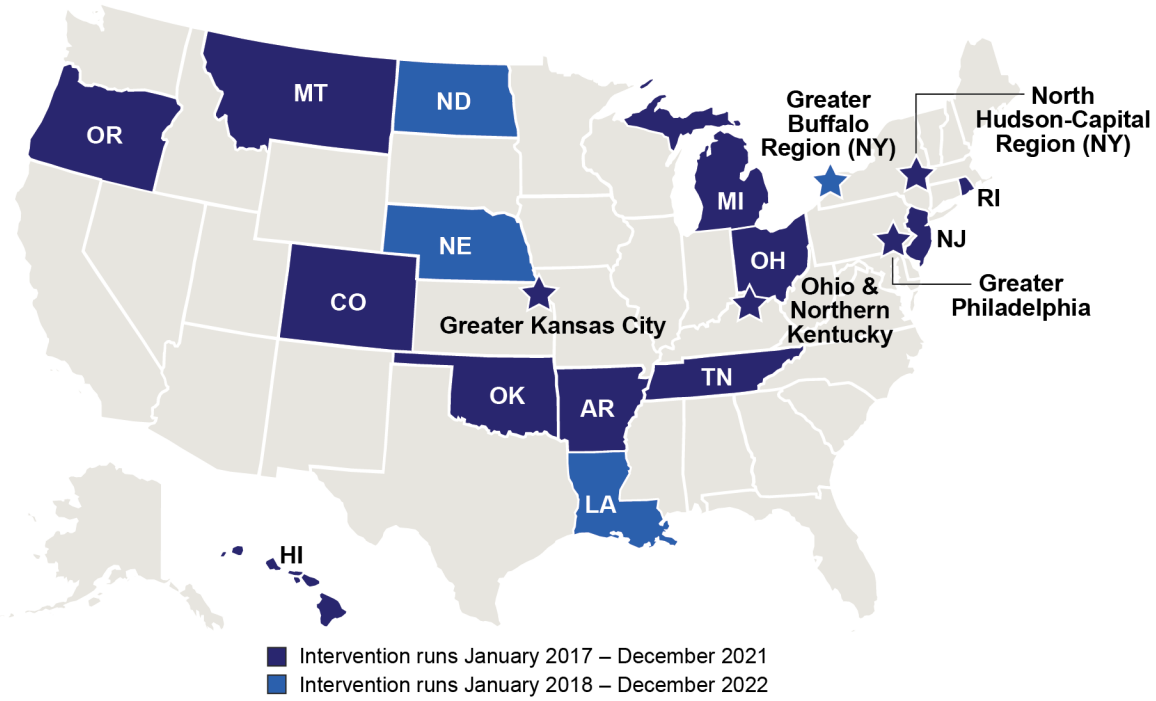
**Patients**

- CPC+ practices that started in 2017 served over 15 million patients in CPC+'s first year. These patients included approximately 2.2 million beneficiaries that Medicare FFS attributed to CPC+ practices (that is, those assigned to CPC+ practices for CPC+ payment purposes), 3.3 million patients attributed by other CPC+ payers, and 9.7 million other nonattributed patients (that is, patients covered by CPC+ payers but not attributed to a practice, patients covered by payers not partnering in CPC+, and uninsured patients).
- Medicare FFS beneficiaries attributed to CPC+ practices were slightly less disadvantaged and healthier than beneficiaries served by all primary care practices participating in the 2017 regions. For example, compared with Medicare beneficiaries attributed to all primary care practices in CPC+ regions, on average, beneficiaries attributed to CPC+ practices:
  - Were less likely to be dually eligible for Medicaid (14 versus 20 percent);
  - Had 10 percent fewer hospitalizations (288 versus 320 per 1,000 beneficiaries); and
  - Had lower average monthly Medicare spending ($883 versus $964).

### Health IT vendors

- Track 2 practices partnered with one or more of 66 health IT vendors that committed to providing required functionalities and supporting practices in using them. Fifty-eight percent of vendors offered a full-featured electronic health record (EHR) to Track 2 practices, and just over one-quarter offered population health or analytic software for panel management, information exchange, and reporting to interested Track 2 practices. Track 1 practices were required to use health IT, but did not formally partner with vendors for CPC+. In 2017, Track 1 practices used products from one or more of 90 health IT vendors (there were a total of 109 distinct vendors working with practices across both tracks).
- Two-thirds of the 66 vendors partnered with fewer than 10 Track 2 practices each, whereas, together, the five largest participating vendors served approximately 80 percent of Track 2 practices.

**Figure 2.1. Regions, payers, and practices selected to participate in CPC+**




**Payers**
2017: **63**
2018: **16**
Total: **79**

**Practices**
2017: **2,905**
2018: **165**
Total: **3,070**

**Practitioners**
2017: **13,209**
2018: **1,135**
Total: **14,344**

**Characteristics of practices in 2017 regions**

Track 1: **48%**
Track 2: **52%**

**47%**
Are dual participants in CPC+ and a Medicare SSP ACO

Track 2 practices partnered with **66** Health IT Vendors in 2017

Served **15.2M** patients

**2.2M** patients attributed by Medicare FFS

**3.3M** patients attributed by other CPC+ payers

**9.7M** other patients

Sources: Mathematica's analysis of 2017 practice-reported data submitted to CMS, and 2017 and 2018 practice and payer rosters collected by CMS.

Note: CMS and other payers attributed patients to CPC+ practices for payment purposes. Other patients included patients covered by CPC+ payers but not attributed to a practice, patients covered by payers not partnering in CPC+, and uninsured patients.

ACO = accountable care organization; SSP = Medicare Shared Savings Program.

## 2.2. Methods

We used several data sources to develop an understanding of CPC+ participants in 2017. To examine who joined CPC+ and how participation changed over time, we used program data—including rosters of payer partners and participating practices, as well as attribution lists of Medicare FFS beneficiaries provided by CMS and financial data reported to CMS by CPC+ practices. To determine the characteristics of these participants, we drew on a survey of payers, practice application data, the CPC+ practice survey, and Medicare FFS enrollment and claims data. To understand the most common motivations for joining CPC+, we analyzed data from qualitative interviews with CPC+ payers, practices, and health IT vendors. We also conducted telephone interviews with withdrawn payers and payers who were not partners in CPC+, as well as practices that voluntarily withdrew from CPC+ in 2017, to identify the key reasons for these decisions and examine perspectives on CPC+ implementation. (Chapter 1 includes additional information on data sources and methods used for the evaluation.)

## 2.3. Selecting 2017 and 2018 CPC+ participants

### 2.3.1. How did CMS select CPC+ regions and payers?

CMS selected regions and payers[9] through a solicitation process in which potential regions were assessed for payer alignment and market density to ensure practices would have sufficient multipayer support to promote practice change. Potential payer partners were expected to align their payment approach with the three elements of CMS' CPC+ payments to achieve multipayer payment reform and care delivery transformation. If selected, payers committed to providing three enhanced and alternative financial supports to participating primary care practices: (1) non-visit based financial support; (2) incentive payments based on performance on utilization, cost of care, and/or quality of care; and (3) alternative to visit-based reimbursement for Track 2 practices.

CMS invited potential payers to respond to a solicitation to partner in CPC+ from April 15 to June 8, 2016, for payers joining in 2017, and hoped to partner with payers in the 7 existing CPC Classic regions as well as in up to 13 new regions. CMS was prepared to add up to 10 new regions to CPC+ in 2018 and accepted solicitations from payers from May 18 to July 13, 2017 (Figure 2.2).

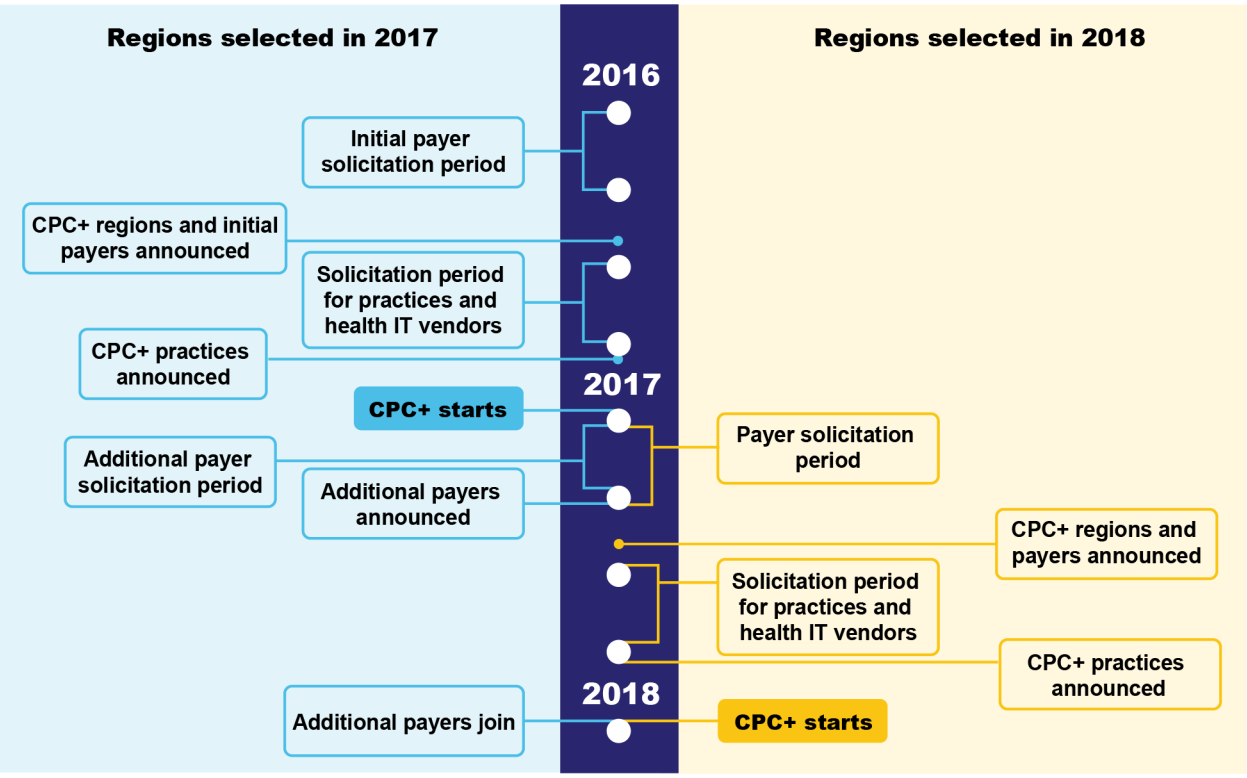
For payers that responded to the solicitations released in 2017 or 2018, CMS conducted initial vetting, mapped interested payers into potential regions, and assessed expected market share among interested payers in each region to ensure sufficient market penetration to engage in CPC+.[10] Within these preliminary regions, review panels that included experts from across the

[9] Payers responding to CMS' CPC+ request for applications could have been commercial insurers (including plans offered via state or federally facilitated Health Insurance Marketplaces), Medicare Advantage plans, states (through the Medicaid and CHIP programs, state employees program, or other insurance purchasing), Medicaid/CHIP managed care plans, state or federal high-risk pools, self-insured businesses, or administrators of a self-insured group (Third-Party Administrator/Administrative Service Only).

[10] The CPC+ Request for Applications, available at https://innovation.cms.gov/files/x/cpcplus-rfa.pdf, describes the payer selection process beginning on page 34.

Department of Health and Human Services for payers joining in 2017 (and included staff from the Center for Medicare & Medicaid Innovation [CMMI] for payers joining in 2018) then evaluated and scored payers' proposals to assess whether payers' goals and approaches aligned sufficiently with CMS' goals and approaches for CPC+.[11]

**Figure 2.2. CPC+ timeline for selecting CPC+ regions, payers, and practices**




CMS and selected payers entered into memoranda of understanding (MOUs) that described their respective roles and indicated how they would work together as part of CPC+.[12] The MOU described payers' commitments to (1) provide enhanced financial support to practices that is aligned with CMS' approach as described above, (2) share data with participating practices, (3) align quality measures with other payers in the region to the extent possible, and (4) develop a common approach toward care delivery requirements and accountability for participating practices.

[11] Selection criteria included (1) experience with multipayer or multistakeholder collaborations; (2) lines of business and network reach in the region; (3) proposed payment models, including care management fees (CMFs), payments to reward practices' performance, and alternative payment approaches for Track 2 practices that moved away from FFS payments; (4) attribution methodologies; (5) data sharing with primary care practices; and (6) quality and patient experience measures that align with those used by other payers in the region and CMS.

[12] The terms of the MOUs are high level and general, and details of each payer's partnership will evolve over time. Because of antitrust considerations, certain details of each payer's agreement with CMS cannot be shared.

In January 2017, 63 payers (in addition to CMS) partnered in CPC+ across the 14 regions (which included all 7 of the CPC Classic regions, although the geographic reach of CPC+ differs from the reach of CPC Classic). In January 2018, CMS added four regions to CPC+, and partnered with 16 additional payers–8 in the regions that started in 2017 and 8 in the regions that started in 2018. Of these 16 additional payers, 6 payers already were partnering in CPC+ regions that started in 2017 and 10 payers were new to CPC+.[13] (The text box at the end of this section highlights the reasons why payers and other stakeholders joined CPC+.)

### 2.3.2. How did CMS select CPC+ practices?

After selecting regions and payers, CMS invited practices that provide primary care (defining a practice as a specific physical location or site) from selected regions to apply to participate. Because practice participation in CPC+ occurs at the site level, a multisite practice organization could have more than one practice applying to participate in CPC+. Each practice site within a multisite practice was required to submit its own application. CMS selected practices providing primary care that it felt were most likely to transform and meet the goals of CPC+.

CMS accepted practice applications from August 1 to September 15, 2016, for regions that started in 2017. CMS offered a second round of solicitations from May 18 through July 13, 2017, for regions that started in 2018, which was intended to broaden opportunities for primary care clinicians to participate in Advanced Alternative Payment Models (APMs) under the Quality Payment Program[14] and contribute to CMS' goal of having 50 percent of all Medicare FFS payments made via APMs by 2018.

In the 14 regions that joined CPC+ in 2017, 4,265 practices applied to participate, and CMS accepted all that met minimum requirements. This process resulted in a diverse group of 2,905 practices that started in 2017[15] (see text box for eligibility criteria). (CMS had capacity for 2,595 practices in 10 regions to start in 2018. CMS selected four regions. From 334 practices that applied, 165 additional practices joined CPC+ in these four regions. Subsequent annual reports will add results for these practices.) CPC+ currently operates in 18 regions (states or metropolitan areas)—just over half the 30 regions CMS could have selected. 3,070 practices joined CPC+ in 2017 and 2018—just over half (56 percent) of the 5,500 practices that CMS had initially projected it had the capacity to support.

[13] A full list of payer partners that joined in 2017 and 2018 is available at https://innovation.cms.gov/Files/x/cpcplus-payerregionlist.pdf.

[14] See Centers for Medicare & Medicaid Services. "CMS Announces Next Phase in Largest-Ever Initiative to Improve Primary Care in America." Press release. August 1, 2016. Available at https://www.cms.gov/Newsroom/MediaReleaseDatabase/Press-releases/2016-Press-releases-items/2016-08-01.html.

[15] Of the 422 CPC Classic practices that remained through the end of CPC Classic and were located in CPC+ regions, 412 practices decided to join CPC+. Additionally, 15 of the 57 practices that withdrew or were terminated from CPC Classic for reasons other than closing and were located in CPC+ regions decided to join CPC+.

**CMS eligibility criteria forpractices to join CPC+**

- Practice must pass program integrity screening.
- Primary care represents 40 percent or more of Medicare FFS services provided by the primary care practitioners at the practice. (See note below.)
- Practice revenue from Medicare and other CPC+ payer partners is 45 percent or more of total practice revenue.
- Practice serves a minimum of 125 Medicare FFS beneficiaries.
- Practice uses certified EHR technology.
- Practice meets baseline care delivery criteria, and is therefore poised to undertake more substantial transformation, as measured by nine items modified from the Patient-Centered Medical Home Assessment (see Section 2.5.1 for a description of the M2-PCMH-A).
  - **Track 1 criteria:** Assign patients to a provider panel, provide 24/7 access for patients, have non-physician team members deliver some clinical care, and support quality improvement activities.
  - **Track 2 criteria:** Meet same criteria as Track 1 practices, as well as use a risk-stratification tool, develop and record care plans, follow up with patients after ED or hospital discharge, and systematically link patients to community-based resources.
- A practice could ***not*** be a concierge practice, rural health clinic, or federally qualified health center; participate in any Medicare Accountable Care Organization (ACO) other than the Medicare SSP ACO; or participate in the Transforming Clinical Practices Initiative learning activities, when CPC+ began.

*Note: Eligible primary care practitioners are those in internal medicine, general medicine, geriatric medicine, and/or family medicine providing primary care services. See Appendix 5.A for additional details on attribution, including the primary care service codes and provider specialties.*

### 2.3.3. How did CMS and other payers attribute CPC+ patients to practices?

CMS and other payers use prospective payment approaches for CPC+, such as a per-patient per-month care management fee paid upfront to help practices invest in care delivery changes. To determine the level of that payment, payers need to assign or attribute patients to CPC+ practices. (Chapter 3 provides details on CPC+ payment methodologies.)

In 2017, CMS and most other payers with insurance products that do not require approval to see a provider (open-access products, such as PPO plans, Medicaid FFS) used a claims-based methodology to attribute patients to CPC+ practices. CMS attributed eligible Medicare FFS beneficiaries to the primary care practice they visited most frequently in the prior 24-month period.[16] CMS attributes Medicare FFS beneficiaries to practices at the beginning of each quarter. Among other payers with a claims-based methodology, the median primary lookback period was 18 months, and more than three-quarters of payers attributed members to the practice

[16] To be eligible for CPC+ payments, Medicare FFS beneficiaries (1) are enrolled in Medicare Parts A and B; (2) use Medicare FFS (as opposed to Medicare Advantage) as their primary payer; (3) do not have End Stage Renal Disease (ESRD) and are not enrolled in hospice; (4) are not institutionalized or incarcerated; and (5) are not attributed to a primary care practice for a non-overlap CMS service (such as chronic care management services or programs, such as a Next Generation ACO).

they visited most often during the lookback period. Other payers attributed patients to the primary care practice seen most recently.

Most payers attributed members in managed products (for example, commercial health maintenance organizations [HMOs], Medicaid managed care, Medicare Advantage) to the primary care practitioners the member selected during enrollment or a subsequent selection process. If members did not select a practitioner, payers either assigned those members to one—a common practice in Medicaid managed care plans—or used a claims-based process to attribute them.

CPC+ practices that started in 2017 reported they had served more than 15 million patients in the program's first year. These patients included approximately 2.2 million attributed Medicare FFS beneficiaries, 3.3 million patients attributed by other CPC+ payers, and 9.7 other nonattributed patients.[17] For the first quarter of 2018, more than 115,000 additional Medicare FFS beneficiaries were attributed to practices that joined CPC+ in 2018. (Data on patients attributed to practices by other payers that started in 2018 were not available at the time of this report.)

### 2.3.4. How did CPC+ practices partner with health IT vendors?

CMS requires all CPC+ practices to use certified EHR technology (CEHRT) and to report to CMS on electronic Clinical Quality Measures (eCQMs). In addition, each Track 2 practice must use advanced health IT functionality to meet several of the CPC+ care delivery requirements (see Chapter 3 for additional details). To support this work, each Track 2 practice formally partnered with one or more health IT vendors committed to developing these functionalities (if not already available) and to supporting practices' use of existing functionalities. Health IT vendors formalized this commitment to support Track 2 practices by providing CMS with Letters of Support (LOSs) and a signed MOU. Vendors were required to submit an individual LOS for each Track 2 practice they were supporting, or a Global LOS if they were supporting multiple practices.

As of September 2017, 66 distinct health IT vendors had partnered with Track 2 practices that started CPC+ in 2017. Track 2 practices that started in 2018 partnered with similar types of health IT vendors (also offering primarily full-featured EHRs, as well as population health, analytic, and reporting software).

[17] CPC+ payers do not attribute all members of a practice's patient panel to the practice. Patients may not be attributed if they are (1) uninsured; (2) insured by a non-partnering payer; (3) insured by a partnering payer but not attributed to the practice (for example, if they saw another practice more frequently or more recently or if they are covered under a non-participating line of business).

## Why did payers, practices, and health IT vendors want to join CPC+?

We asked a representative sample of payers, practices, and health IT vendors that started CPC+ in 2017 about their motivations for joining CPC+. Most commonly, practices, payers, and health IT vendors reported that alignment between their strategic mission and prior work and the aims of CPC+ contributed to their decision to join CPC+. Payers also were motivated by the desire to collaborate with a large number of other payers, while practices—particularly independent ones—sought additional financial resources to support patient care.

| Motivations for joining CPC+: payers, practices, and health IT vendors | |
|---|---|
| **Payers** | |
| **Alignment with mission and prior work** | • Most payers noted that CPC+ aligned with their organizational philosophy that value-based payment approaches are critical for improving health care delivery.<br>• Several payers that partnered in CPC Classic noted that they felt a sense of accomplishment and progress during CPC Classic that they wanted to continue through CPC+. |
| **Multipayer collaboration** | • Payers wanted to collaborate with other payers in their region to further the gains practices are making along their primary care practice transformation journey through additional financial support from multiple payers.<br>• Five payers viewed the participation of Medicare FFS to be critical for growing the success and momentum of CPC+, while also providing a model to follow in structuring alternatives to FFS payments.<br>• Several payers were encouraged or required to partner by the state Medicaid agency. In Ohio, Oregon, and Tennessee, the state Medicaid agency required or encouraged managed care organizations to participate. |
| **Practices** | |
| **Alignment with mission and prior work** | • Approximately three-quarters of deep-dive practices—both system-affiliated and independent—reported that CPC+ was a “natural progression” of work they were already doing. Given work with concurrent initiatives, these practices reported already having many of the CPC+ components in place.<br>• In many of the participating health systems, leaders noted there was already a focus on primary care and value-based care in their system, which made CPC+ participation a natural fit. |
| **Additional financial resources to support patient care** | • Most small, independent practices described the importance of CPC+’s financial support, whereas just under half of system-owned practices focused on CPC+ payments as a key motivation for participation.<br>• A few practice leaders noted that it was appealing that CPC+ was classified by CMS as an alternative payment model. |
| **Health IT vendors** | |
| **Alignment with mission and prior work** | • More than two-thirds of vendors reported CPC+ aligned with their company's overall strategy, including a movement toward software that supports value-based care and specialized solutions for population health.<br>• More than two-thirds of vendors, particularly large vendors with a comparatively large share of the CPC+ market, were motivated to participate in CPC+ to continue working with customers who participated in CPC Classic. |

## 2.4. CPC+ region and payer involvement in 2017

### 2.4.1. Region involvement

Ten of the 14 regions that started CPC+ in 2017 are statewide: Arkansas, Colorado, Hawaii, Michigan, Montana, New Jersey, Oklahoma, Oregon, Rhode Island, and Tennessee. The other four regions that started in 2017 include portions of states: Greater Kansas City, New York's North Hudson–Capital Region, Ohio and Northern Kentucky (including all of Ohio and only parts of Northern Kentucky), and Greater Philadelphia. See Appendix Tables 2.1 and 2.2 for additional background information on CPC+ regions that started in 2017.

### 2.4.2. Payer involvement

Sixty-three payers joined CPC+ in January 2017. The number and type of payers that joined CPC+ varied substantially across regions. The number of payers ranged from one payer each in Hawaii and Greater Kansas City to 14 payers in Oregon. These payers represent a mix of private and public payers. For example, in almost all regions (with the exception of Tennessee), at least one commercial insurer partnered in CPC+. Only two regions do not have Medicaid participation—either through the State Medicaid agency or through a Medicaid MCO.

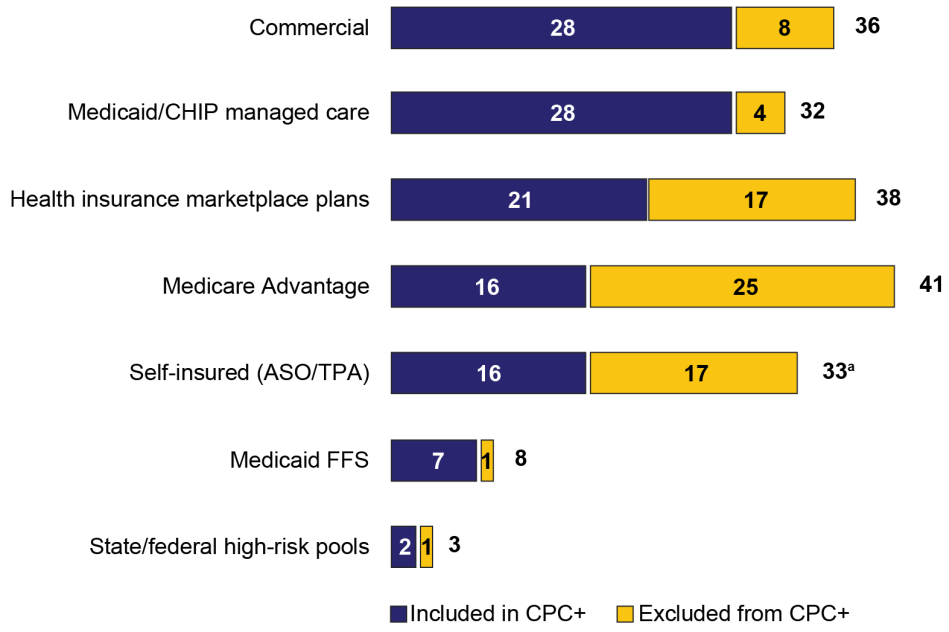
In almost all regions, CPC+ payers felt that the major payers were partnering with CMS for CPC+. However, in a small minority of regions, payers partnering with CPC+ expressed disappointment about the absence of a few major payers, who most often were large, national payers. Some of these national payers provided insight into the major reason that they did not join in some or all regions, noting that they did not have sufficient covered lives in the regions that they did not join to justify the perceived financial and administrative costs associated with partnering.

#### Which lines of business did payers include in CPC+ in 2017?

Payers generally did not offer CPC+ payments for all of their lines of business, though approximately half included multiple lines of business in CPC+. Payers were least likely to offer CPC+ payments for Medicare Advantage (39 percent of payers with this line of business) and most likely to do so for Medicaid FFS and Medicaid managed care (88 percent of payers with each of these lines of business) (Figure 2.3). In several regions, the state Medicaid agency required or encouraged Medicaid MCOs to partner in CPC+.

**Self-insured participation**. Forty-eight percent of the 33 payers with self-insured clients reported that they provided enhanced or alternative payments for at least some self-insured lives. All of these 33 payers either required that self-insured clients partner with them for CPC+ (9 payers) or made enrollment automatic with the option for clients to opt out (7 payers). Payers that did not include self-insured clients in CPC+ either did not pursue their partnership in CPC+ (6 payers) or encouraged self-insured clients to opt-in (11 payers). In general, self-insured clients that were encouraged to opt in to CPC+ were hesitant to join voluntarily without evidence of cost savings or return on investment.

**Figure 2.3. Number of payers that offer a line of business and included or excluded it from CPC+**




Sources: Mathematica's analysis of payer application data submitted to CMS and 2017 CPC+ Payer Survey data and payer interview data.

Notes: At the time of the Mathematica survey, 62 payers were partnering with CMS in CPC+, but one payer did not complete the survey; therefore, n = 61 payers.

Payers can offer more than one line of business, so rows will not total to 61.

National payers are counted once for each region in which they are partnering.

[a] Payers that included any self-insured lives in CPC+ were included in the counts of payers that included their self-insured line of business in CPC+. Some of these payers included most or all of their self-insured lives in CPC+, whereas others included a small proportion.

FFS = fee for service; ASO = administrative services only; TPA = third party administrator.

## What were the characteristics of CPC+ payers in 2017?

Payers partnering in CPC+ varied on several key characteristics relevant to practice transformation, including market share and size (Table 2.1):

- Approximately one-quarter of payers partnered in multiple CPC+ regions. A few payers with a CPC+ presence in multiple regions decided not to enter all potential CPC+ regions where they could have had a presence. They made decisions about which region(s) to enter on a "market-by-market" basis, based on their assessment of potential return on investment and the projected number of CPC+ covered lives.
- Payers varied in the number of patients they attributed to CPC+. The median number of attributed lives for payers in 2017 was just over 20,000 attributed patients. The six largest CPC+ payers each attributed more than 200,000 patients to CPC+ practices. Together, these six payers accounted for 52 percent of all CPC+ lives attributed by non-CMS payers.

- Finally, payers varied in terms of their experience with prior primary care transformation initiatives, with 43 percent of payers having partnered with CMS in CPC Classic. Moreover, 16 percent participated in MAPCP.

**Table 2.1. CPC+ payer characteristics, as of December 2017**

| | Number of CPC+ payers | Percentage of CPC+ payers |
|---|---|---|
| **Payer size** | | |
| Small (<10,000 lives attributed to CPC+ practices) | 18 | 30 |
| Medium (10,000–99,999 lives attributed to CPC+ practices) | 25 | 41 |
| Large (> or = 100,000 lives attributed to CPC+ practices) | 18 | 30 |
| **Single vs. multi-regional presence** | | |
| Single region | 45 | 74 |
| Multi-region | 16[a] | 26 |
| **Participation in selected prior transformation initiatives[b]** | | |
| CPC Classic | 26 | 43 |
| MAPCP | 10 | 16 |
| Neither CPC Classic nor MAPCP | 28 | 46 |

Source: Mathematica's analysis of 2017 practice-reported financial data submitted to CMS and 2017 CPC+ Payer Survey data.

[a] This value represents six unique payers. One payer partnered in six regions, one partnered in three regions, and three partnered in two regions. The last payer is considered a multi-regional payer because they have a presence in multiple regions beginning in 2018, but partnered in only one region in 2017.

[b] Three payers joined both CPC Classic and MAPCP. These payers are included in the CPC Classic and MAPCP participation counts, so the percentage of CPC+ payers does not sum to 100 percent.

MAPCP = Multi-payer Advanced Primary Care Practice.

## How did payer partnership change in 2017?

Two payers that began CPC+ in 2017 withdrew by the end of 2017.[18] Both of these payers were small, regional plans in Oregon. One payer covered multiple lines of business, including commercial, Medicare Advantage, and/or Medicaid managed care, while the other payer was exclusively a Medicaid managed care plan. These two payers indicated that they withdrew for reasons largely unrelated to CPC+ and primarily related to their internal organizational strategy or changes and financial pressures.

[18] Through September 4, 2018, six payers (all of which started in 2017) have withdrawn from CPC+.

## 2.5. CPC+ practice participation in 2017

In January 2017, 2,905 practices joined CPC+.[19] These practices were approximately evenly split between Tracks 1 and 2 and Medicare SSP status, meaning that approximately half of practices were in each track, and approximately half of practices were participating in the Medicare SSP (Table 2.2). CPC+ practices reported that more than 13,000 primary care practitioners primarily saw patients at their sites as of December 2017. The median number of CPC+ primary care practitioners per practice was four. See Appendix Table 2.3 for further details by region.

**Table 2.2. Practice participation in CPC+ for 2017, by track and Medicare SSP participation**

| | | Track 1 | | | Track 2 | | |
|---|---|---|---|---|---|---|---|
| | Overall | Total | Medicare SSP | Non-Medicare SSP | Total | Medicare SSP | Non-Medicare SSP |
| **Number of practices** | | | | | | | |
| Jan. 1, 2017 | 2,905 | 1,385 | 738 | 647 | 1,520 | 616 | 904 |
| Dec. 31, 2017 | 2,786 | 1,310 | 689 | 621 | 1,476 | 587 | 889 |
| **Number of primary care practitioners** | | | | | | | |
| Jan. 1, 2017 | 13,209 | 5,576 | 2,815 | 2,761 | 7,633 | 3,299 | 4,334 |
| Dec. 31, 2017 | 13,404 | 5,617 | 2,800 | 2,817 | 7,787 | 3,295 | 4,492 |

Sources: Mathematica's analysis of 2017 practice rosters provided by CMS.
Medicare SSP = Medicare Shared Savings Program.

### What were the characteristics of CPC+ practices in 2017?

CMS recruited a diverse set of practices. Although on average, they were more advanced in several ways than other primary care practices in their regions, these practices were still diverse and showed several areas for improvement related to primary care transformation.

Before CPC+ began in January 2017, CPC+ practices were more likely than all practices providing primary care in their regions to have PCMH recognition, be in the Medicare SSP, use health IT that met meaningful use criteria, be owned by a health system or hospital, and be larger in terms of the average numbers of attributed beneficiaries (Table 2.3). For more details on practice characteristics, including those of applicants, please see Appendix Tables 2.4 and 2.5.

[19] In January 2018, CMS assigned distinct IDs to 13 practices that were operating as distinct practice sites—but were participating under only one of two CPC+ IDs. We retroactively counted these practices as 13 distinct practices since the start of CPC+.

## Table 2.3. Practice characteristics for CPC+ practices that started in 2017 and all primary care practices in CPC+ regions, before CPC+

| Characteristic | Practices in CPC+ regions that provide primary care to adult Medicare beneficiaries | |
|---|---|---|
| | All practices (n = 14,842)[a] | CPC+ practices as of April 1, 2017 (n = 2,888) |
| **Practice size and ownership as of November 2016** | | |
| Mean number of practitioners (any specialty) | 3.5 | 5.5 |
| Mean number of primary care practitioners | 3.1 | 4.8 |
| Percentage of practices that have: | | |
| 1–2 primary care practitioners | 61 | 34 |
| 3–5 primary care practitioners | 26 | 38 |
| 6+ primary care practitioners | 13 | 28 |
| Percentage of practitioners in the practice who are primary care | 96 | 96 |
| Mean number of assigned Medicare beneficiaries in 2016 | 343 | 674 |
| Mean number of assigned Medicare beneficiaries in 2016 per PCP | 154 | 193 |
| Percentage owned by a health system or a hospital[b] | 31 | 55 |
| Percentage owned (or managed) by a health system | 27 | 50 |
| Percentage owned by a hospital | 17 | 28 |
| **Percentages of practices with selected transformation experience** | | |
| Patient-Centered Medical Home recognition[c] | 25 | 52 |
| Participant in a Medicare SSP ACO as of January 1, 2017 | 31 | 48 |
| Participant in CMMI's Transforming Clinical Practice Initiative at any point in 2016 | 7 | 10 |
| Participant in CMMI's Multi-Payer Advanced Primary Care Practice Demonstration[d] | 3 | 7 |
| Participant in CPC Classic[e] | 3 | 15 |
| **Percentages of practices using EHRs** | | |
| Use of EHR software to prescribe, view labs and X-rays, and take patient notes, 2016[f] | 61 | 80 |
| Meaningful EHR use, 2011–2015[g] | 59 | 90 |
| **Characteristics of practices' county** | | |
| Median household income in the county in which the practice is located ($), 2014 | 55,577 | 57,886 |
| Percentage of practices that were ever in a whole county health professional shortage area, 2015–2016 | 2 | 2 |
| Percentage in a rural location, 2013 | 12 | 9 |
| Percentage in a suburban location, 2013 | 13 | 15 |
| Percentage in an urban location, 2013 | 74 | 77 |

Sources: Mathematica's analysis of data on practice size and ownership from SK&A data; data on the number and characteristics of assigned Medicare beneficiaries from Medicare Enrollment Database and claims data; data on Patient-Centered Medical Home recognition from NCQA, TJC, AAAHC, URAC, and state-specific data sources; data on Medicare SSP ACO participation from CMS' Master Data Management data; data on participation in CMMI's Transforming Clinical Practice Initiative, participation in CMMI's Multi-payer Advanced Primary Care Practice program, and participation in CPC Classic from CMS; data on meaningful use of EHR from CMS' Medicare EHR Incentive Program data; and county data from the Area Resource File.

Notes: Table presents the unweighted mean value for each characteristic. Primary care practices include all practices that have at least one practitioner (defined as a physician, nurse practitioner, or physician assistant) with a specialty of primary care (defined as family practice, general practice, geriatrics, or internal medicine).

[a] We excluded 2,692 practices (15 percent) from the sample of all primary care practices in the 2017 regions because they had no assigned Medicare FFS beneficiaries in 2016.

[b] In the SK&A data, a practice can be both owned (or managed) by a health system and owned by a hospital.

[c] A practice was considered to have medical home recognition if it at least one of its primary care practitioners was listed as having recognition at some point in 2014–2017 from a state, the AAAHC, TJC, NCQA, or URAC, as determined by

**Table 2.3.** ***(continued)***

the June 2016 NCQA PCMH file and data extracted from the websites of TJC, AAAHC, URAC and state-specific sources between October 2016 and February 2017.

d We considered a practice to be a Multi-Payer Advanced Primary Care Practice Demonstration participant if it participated in any year from 2011–2014, as determined by a file from CMS.

[e] A practice was considered to have participated in CPC Classic if it enrolled in CPC Classic and did not drop out within the first five months of CPC Classic.

[f] The variable for use of EHR software is missing for 68 participating practices; from SK&A data measured as of November 2016.

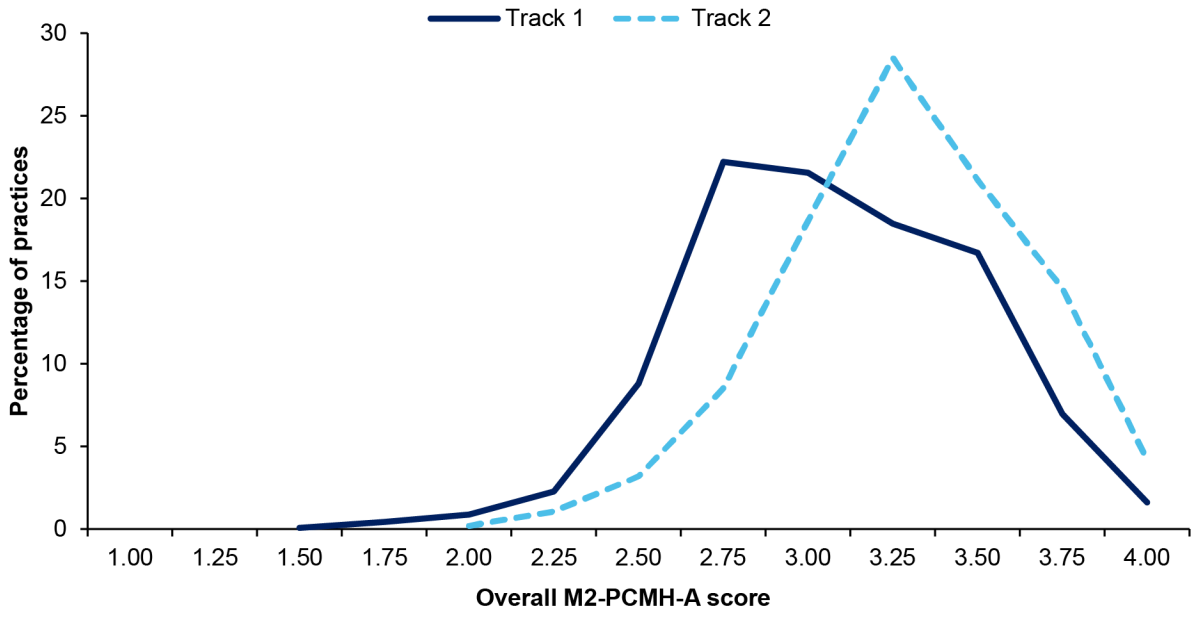
[g] At least one practitioner attested to meaningful use under the Medicare EHR Incentive Program, 2011–2015.

AAAHC = Accreditationt Association for Ambulatory Health Care; ACO = Accountable Care Organization; CMMI = Center for Medicare & Medicaid Innovation; EHR = electronic health record; FFS = fee-for-service; NCQA = National Committee for Quality Assurance; PCP = primary care practitioner; TJC = The Joint Commission; URAC = Utilization Review Accreditation Commission.

Although many CPC+ practices reported fairly advanced approaches to care delivery at the start of CPC+, there was still room for improvement. To understand practices' approaches to care delivery, we used a modified version of the Patient-Centered Medical Home-Assessment (referred to as the M2-PCMH-A) administered as part of a survey of CPC+ practices that was fielded between March and September 2017. This instrument asked practices to rate their approaches to care delivery in seven domains on a scale from 1 to 4. Across both tracks, the mean overall M2-PCMH-A score was 3.05 out of 4, with practice scores ranging from 1.39 to 3.98.

- Track 2 practices reported slightly better care delivery approaches than Track 1 practices on average, but there was substantial overlap of scores between practices in each track (Figure 2.4). On average, practices in Track 2 had an overall M2-PCMH-A score of 3.15 out of 4, and practices in Track 1 had an average score of 2.94.

**Figure 2.4. CPC+ practices' distributions of 2017 overall M2-PCMH-A scores, by track**

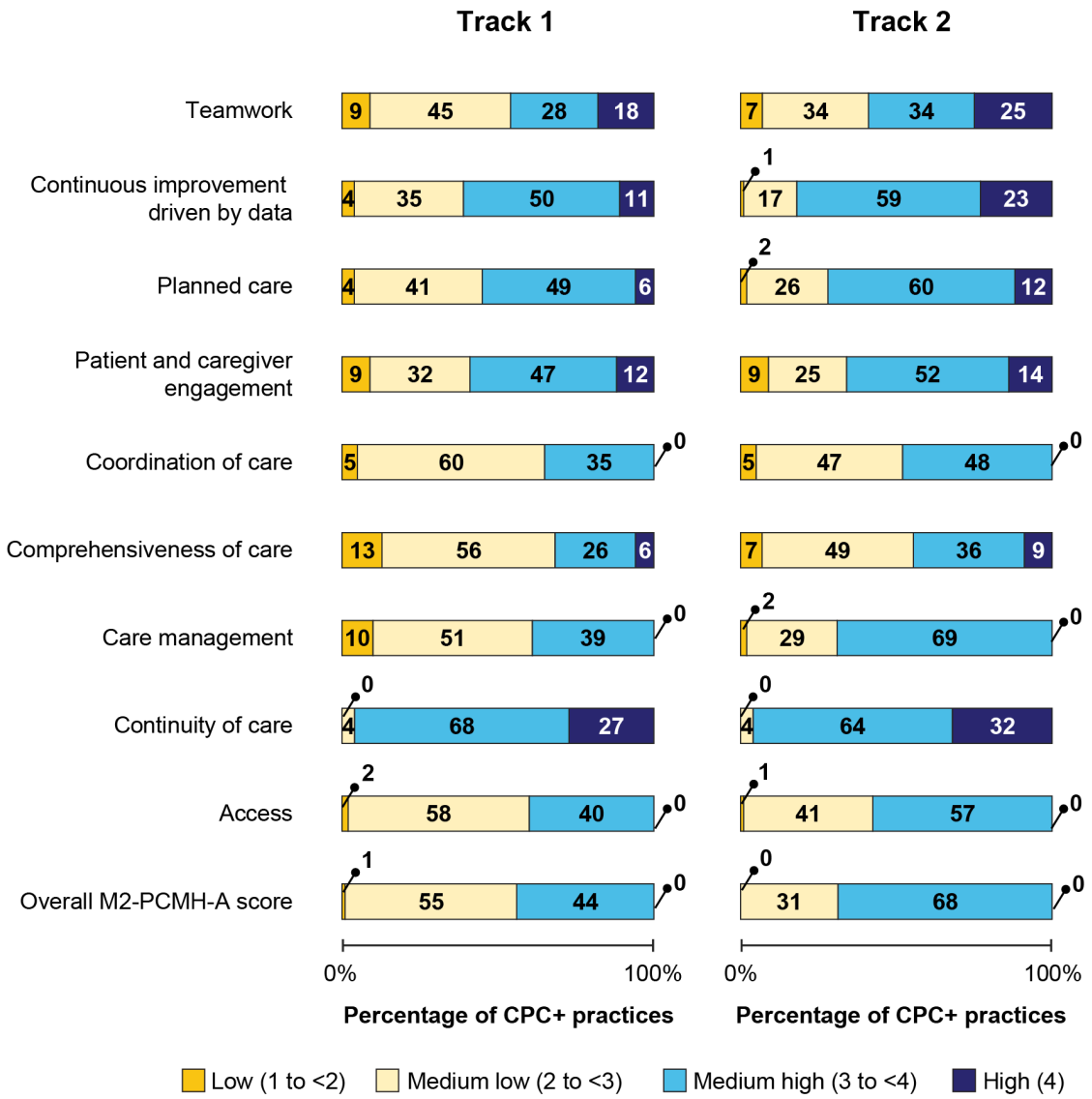



Source: Mathematica's analysis of the 2017 CPC+ Practice Survey.

M2-PCMH-A = Modified version of the Patient-Centered Medical Home-Assessment

- Within each track, practices participating in the Medicare SSP and those that were not had similar overall M2-PCMH-A scores. The mean overall M2-PCMH-A score for Track 1 practices in the Medicare SSP was 2.92, compared with 2.95 for non-Medicare SSP practices; for Track 2 practices, the mean overall score was 3.12 for practices in the Medicare SSP compared with 3.18 for non-Medicare SSP practices.
- Practices in both tracks self-reported the highest scores for the continuity domain and the lowest scores for the comprehensiveness and coordination of care domains (Figure 2.5).

**Figure 2.5. CPC+ practices' distributions of 2017 M2-PCMH-A scores overall and for the nine domains, by track**

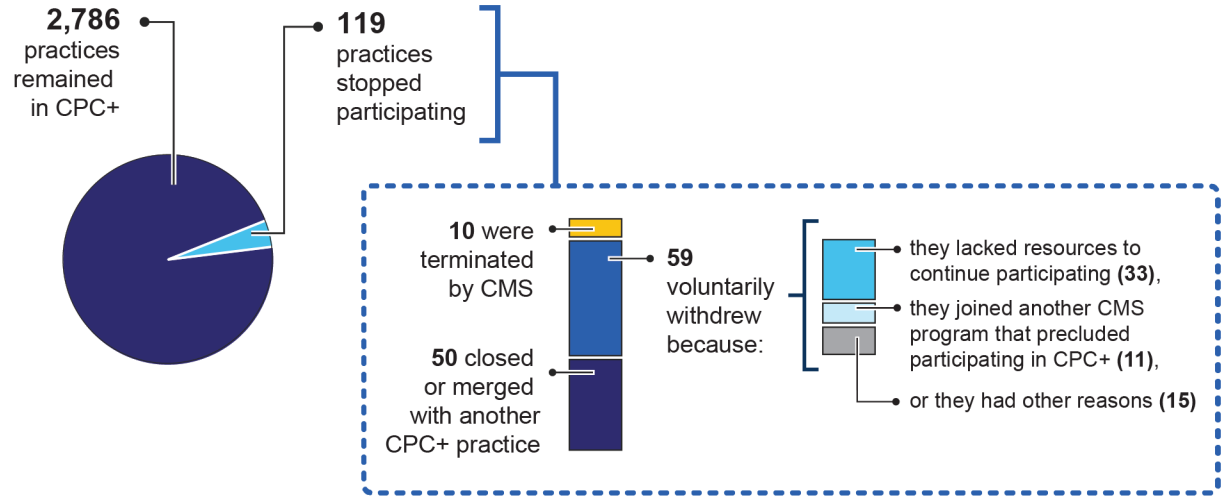



Source: Mathematica's analysis of the 2017 CPC+ Practice Survey.
M2-PCMH-A = Modified version of the Patient-Centered Medical Home-Assessment.

## How did practice participation change in 2017?

At the end of December 2017, 2,786 practices were still participating in CPC+. At that time, 119 practices (4 percent) of the 2,905 practices that joined CPC+ in 2017 had stopped participating. Hawaii saw the greatest decrease in practice participation (15 percent) followed by New York, Montana, and Greater Kansas City (each about 9 percent). In the regions combined, 50 of the 119 practices that stopped participating (42 percent) did so due to organizational changes (14 closed and 36 merged with other practices). Roughly half of practices that left CPC+ (59 practices, or 50 percent) voluntarily withdrew from CPC+. CMS also terminated 10 practices that either did not meet EHR requirements or did not satisfy CPC+ reporting requirements (Figure 2.6). These practices were evenly split among those that failed to submit patient rosters or complete care delivery reporting versus those that were unable to submit EHR documentation.

**Figure 2.6. Reasons practices stopped participating in CPC+ in 2017**




Source: Mathematica's analysis of 2017 practice rosters collected by CMS.

To better understand practices' reasons for withdrawal from CPC+, we interviewed nine practices: five practices that voluntarily withdrew, two practices that were terminated by CMS, and two practices that closed or merged with another practice.[20] The practices that voluntarily withdrew noted that the primary reasons for program withdrawal were related to administrative burden and inadequate payment support. Practices also withdrew due to organizational changes if they were joining an organization that was already participating in another CMS model that precluded their participation in CPC+, such as the Next Generation ACO Model.

[20] Of these nine practices, six were small to midsize practices that were independently owned, two were hospital-owned, and one was a large multispecialty group.

- **Perceived administrative burden**. Practices that voluntarily withdrew, most of which were independent small practices, said that CPC+ felt geared toward large-group or hospital- or health system-owned practices that can centrally support the administrative requirements. Solo practices that withdrew indicated that they did not have the administrative resources needed to document and report on all care activities, negotiate with hospitals and specialists about data sharing and coordinated care agreements, and budget and forecast CPC+ funds. Four small practices that voluntarily withdrew noted costly EHR documentation and reporting challenges to meet CPC+ requirements. The two practices that were part of a multispecialty group or health system or hospital that had centralized IT support did not express similar health IT issues.
- **Perceived inadequacy of payment supports**. Withdrawn practices affiliated with hospital systems and large multispecialty groups found CPC+ payments to be adequate; however, small and midsize withdrawn practices that were independently owned did not feel that CPC+ payments were sufficient to cover additional administrative and IT support needed to participate.

## 2.6. Patients served by CPC+ practices in 2017

CPC+ practices that started in 2017 reported that they served more than 15 million patients. These patients included approximately 2.2 million attributed Medicare FFS beneficiaries, 3.3 million patients attributed by other CPC+ payers, as well as 9.7 million other patients (Table 2.4). Other patients included patients covered by CPC+ payers but not attributed to a practice, patients covered by payers not partnering in CPC+, and uninsured patients.

### Table 2.4. Patients served by CPC+ practices in 2017, by track and Medicare SSP participation

| | Overall | Track 1 | | | Track 2 | | |
|---|---|---|---|---|---|---|---|
| | | Total | Medicare SSP | Non-Medicare SSP | Total | Medicare SSP | Non-Medicare SSP |
| **Number of patients** | | | | | | | |
| Attributed Medicare FFS beneficiaries in a given quarter | | | | | | | |
| Jan. 1, 2017 | 1,826,944 | 831,848 | 427,401 | 404,447 | 995,096 | 430,410 | 564,686 |
| Dec. 31, 2017 | 1,888,447 | 860,200 | 446,852 | 413,348 | 1,028,247 | 446,151 | 582,096 |
| Unique attributed Medicare FFS beneficiaries over time | | | | | | | |
| Through Dec. 31, 2017 | 2,237,033 | 1,020,634 | 528,095 | 492,539 | 1,216,399 | 528,173 | 688,226 |
| Attributed patients by other payer partners | | | | | | | |
| Dec. 31, 2017 | 3,348,302 | 1,162,071 | 482,354 | 679,717 | 2,186,231 | 929,603 | 1,256,628 |
| Other, nonattributed patients served by practices | | | | | | | |
| Dec. 31, 2017 | 9,738,218 | 4,288,716 | 2,242,933 | 2,045,783 | 5,449,502 | 2,294,632 | 3,154,870 |
| **Total patients served by CPC+ practices (attributed by Medicare FFS and other payers, plus nonattributed patients)** | | | | | | | |
| Dec. 31, 2017 | 15,022,820 | 6,331,151 | 3,194,112 | 3,137,039 | 8,691,669 | 3,673,344 | 5,018,325 |

Sources: Mathematica's analysis of 2017 practice-reported financial data submitted to CMS and Medicare FFS beneficiary attribution lists.

Note: We deduplicated lists of Medicare FFS beneficiaries attributed to CPC+ practices from January 2017 through December 2017 to calculate the total unique Medicare FFS beneficiaries ever attributed during this period.

FFS = fee-for-service; Medicare SSP = Medicare Shared Savings Program.

## What were the characteristics of attributed Medicare FFS patients in 2017?

Although Medicare FFS beneficiaries assigned to CPC+ practices were diverse, they were on average slightly healthier and less disadvantaged than those whom all primary care practices served in 2017 regions (Table 2.5). For example, compared with Medicare beneficiaries assigned to all primary care practices, on average those assigned to CPC+ practices:

- Were less likely to be dually eligible for Medicaid (14 versus 20 percent)
- Had fewer hospitalizations (288 versus 320 per 1,000 beneficiaries)
- Had lower average monthly Medicare spending ($883 versus $964)

For more details on patient characteristics, please see Appendix Tables 2.6 and 2.7.

### Table 2.5. Characteristics of Medicare beneficiaries assigned to CPC+ practices that started in 2017 and all primary care practices in CPC+ regions, before CPC+

| Characteristic | Practices in CPC+ regions that provide primary care to adult Medicare beneficiaries | |
|---|---|---|
| | All practices (n = 14,842)[a] | CPC+ practices as of April 1, 2017 (n = 2,888) |
| **Characteristics of Medicare beneficiaries assigned to practices in 2016** | | |
| Percentage of beneficiaries who were dually eligible during October–December 2015 | 20 | 14 |
| Mean HCC score in 2015 | 1.08 | 1.03 |
| Percentage of beneficiaries in the top quartile of HCC scores in 2015 | 27 | 25 |
| Percentages of beneficiaries with the following chronic conditions as of January 1, 2016 | | |
| Alzheimer's and related dementia | 8 | 7 |
| Cancer | 7 | 8 |
| Chronic obstructive pulmonary disease | 12 | 10 |
| Chronic kidney disease | 17 | 16 |
| Congestive heart failure | 13 | 11 |
| Diabetes | 28 | 26 |
| **Medicare expenditures and service use from January 1, 2016, through December 31, 2016, among Medicare beneficiaries assigned to practices in 2016** | | |
| Mean monthly Medicare expenditures per beneficiary ($ per month) | 964 | 883 |
| Median monthly Medicare expenditures per beneficiary ($ per month) | 284 | 227 |
| Acute hospitalizations per 1,000 beneficiaries[b] | 320 | 288 |
| Total ED visits per 1,000 beneficiaries[c] | 608 | 513 |
| Primary care (ambulatory) visits per 1,000 beneficiaries[d] | 3,529 | 3,593 |
| Percentage who had a 14-day follow-up visit after hospitalization | 67 | 69 |

**Table 2.5.** ***(continued)***

| Characteristic | Practices in CPC+ regions that provide primary care to adult Medicare beneficiaries | |
|---|---|---|
| | All practices (n = 14,842)[a] | CPC+ practices as of April 1, 2017 (n = 2,888) |
| **Characteristics of high-risk Medicare beneficiaries (Tiers 4 and 5) from January 1, 2016, through December 31, 2016** | | |
| Median monthly spending of beneficiaries who would be Tier 4 or 5 ($ per month) | 689 | 566 |

Source: Mathematica's analysis of data from the Medicare Enrollment Database and claims data.

Note: Table presents the unweighted mean value for each characteristic. Primary care practices include all practices that have at least one practitioner (defined as a physician, nurse practitioner, or physician assistant) with a specialty of primary care (defined as family practice, general practice, geriatrics, or internal medicine).

[a] Table includes only 14,842 of the 17,534 primary care practices in the 2017 regions because we excluded 2,692 practices (15 percent) that had no assigned Medicare FFS beneficiaries in 2016.

[b] Includes short stay acute care and critical access hospitals, and is annualized.

[c] Total ED visits includes observation stays and is annualized.

[d] Primary care ambulatory visits includes visits to federally qualified health centers, rural health clinics, and critical access hospitals, and is annualized.

ED = emergency department; FFS = fee-for-service; HCC = Hierarchical Condition Category, a claims-based measure of risk for subsequent expenditures.

## 2.7. Health IT vendor involvement in CPC+ in 2017

As of September 2017, 66 distinct health IT vendors partnered with Track 2 practices that started CPC+ in 2017.[21] As health IT vendors offer different functionalities to support the CPC+ functions, practices can partner with multiple vendors to meet CPC+ care delivery requirements. Twenty-seven percent of Track 2 practices use multiple vendors. Track 1 practices were required to use health IT, but did not formally partner with vendors for CPC+. In 2017, Track 1 practices used products from one or more of 90 health IT vendors (there were a total of 109 distinct vendors working with practices across both tracks). The remainder of this section focuses on the 66 vendors that formally partnered with Track 2 practices for CPC+.

### What were characteristics of participating health IT vendors in 2017?

Track 2 practices partnered with 66 health IT vendors offering a range of products and of different sizes and geographic scopes:

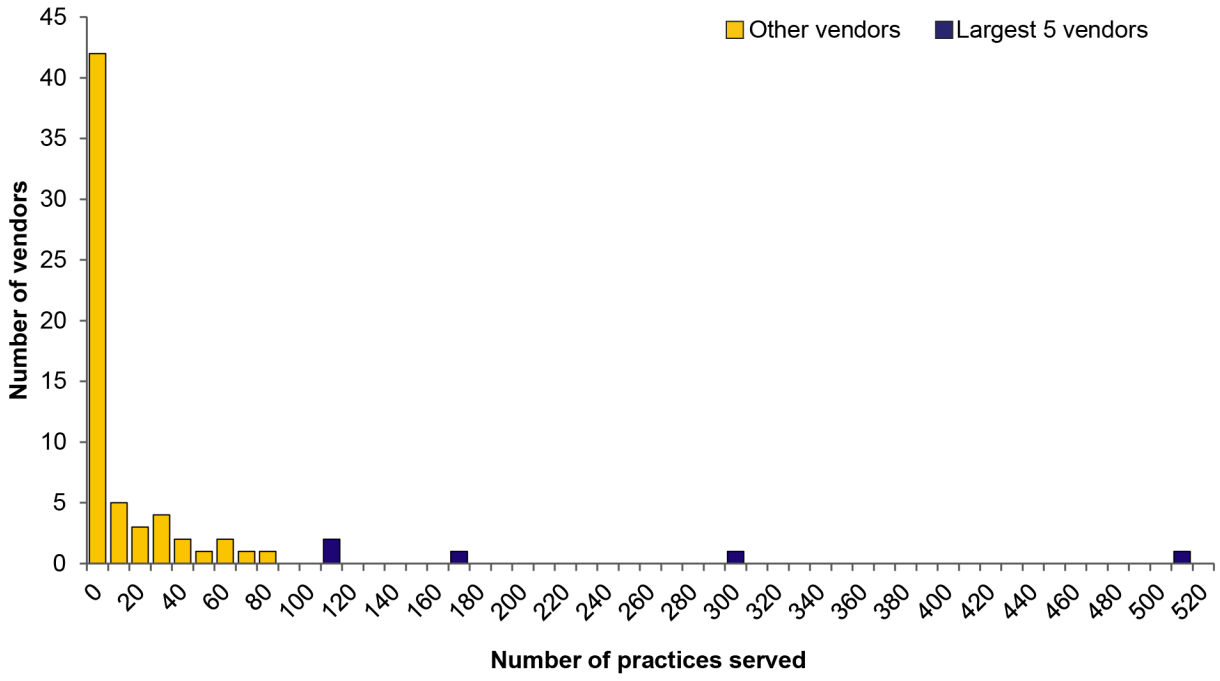
- These 66 health IT vendor partners worked with a median of 4.5 Track 2 CPC+ practices, ranging from 1 to more than 500 Track 2 practices. Although they did not enter into formal

[21] It took several months for vendors to fully begin working with practices. Therefore, we include one point-in-time estimate for vendors in this report and will track vendor participation over time starting with the second annual report.

partnerships, a median of three Track 1 practices used products offered by these 66 vendors, ranging from 0 Track 1 practices per vendor to more than 300 Track 1 practices per vendor.

- Two-thirds of the 66 vendors partnered with fewer than 10 Track 2 practices each, whereas 5 large vendors—Allscripts, eClinicalworks, Epic, IBM Watson, and Nextgen—each partnered with more than 100 Track 2 practices. These large vendors worked with 1,232 (or approximately 80 percent) of Track 2 practices (Figure 2.7).
- Fifty-eight percent of vendor partners offered a full-featured EHR, while just over one-quarter provided population health or analytic software for panel management, information exchange, and reporting. Remaining vendors offer narrower types of IT solutions—for example, software that focuses on one condition, such as diabetes (Table 2.6).
- Vendor partners also ranged in geographic scope. More than half of vendors worked with practices in a single CPC+ region; only one vendor worked with practices in all 14 regions (Table 2.6).

**Figure 2.7. Distribution of number of Track 2 practices with which health IT vendors partnered**




Source: Mathematica's analysis of 2017 practice-reported data on health IT vendor partnerships submitted to CMS.

## Table 2.6. Characteristics of participating health IT vendor partners, as of September 2017

| | Number of vendors (N = 66 vendors) | Percentage |
|---|---|---|
| **Type** | | |
| Full-featured EHR | 38 | 58 |
| Population health or analytic software | 17 | 26 |
| Other[a] | 11 | 17 |
| **Number of CPC+ regions in which vendor partner has a presence** | | |
| One region | 38 | 58 |
| Two or more regions | 28 | 42 |
| **Number of Track 2 practices that partnered with the vendor** | | |
| One practice | 17 | 26 |
| 2–9 practices | 25 | 38 |
| 10–99 practices | 19 | 29 |
| 100 or more practices | 5 | 8 |
| **Number of Track 1 practices that used vendor** | | |
| Zero practices | 19 | 29 |
| One practice | 8 | 12 |
| 2–9 practices | 19 | 29 |
| 10–99 practices | 16 | 24 |
| 100 or more practices | 4 | 6 |

Source: Data from analysis of practice data provided to Mathematica by CMS and its contractors in September 2017.

Notes: At the time of selection, the 66 vendor partners collectively worked with 1,498 Track 2 practices. The 13 vendor partners selected for interviews collectively worked with 1,250 Track 2 practices.

Percentages may not add to 100 due to rounding.

[a] "Other" vendors provide health IT solutions that are narrower than full-featured EHRs and population health or analytic software. For example, these vendors may provide software that tracks patients through care transitions but does not facilitate reporting, or software that exclusively focuses on diabetes. Or they may facilitate practices' use of health IT but not actually provide the software themselves.

EHR = electronic health record; health IT = health information technology.

# 3. WHAT SUPPORT DID CMS, OTHER PAYERS, AND HEALTH IT VENDORS PROVIDE TO CPC+ PRACTICES IN 2017?

CPC+ practices in the 14 regions that began in 2017 received payment, data feedback, and learning support from CMS and other participating payers. In this chapter, we draw on a range of data including surveys of CPC+ payers and practices and interviews with payers, practices, and health IT vendors to describe the supports practices received in 2017.

Whereas data feedback and learning activities were generally the same across CPC+ tracks, Track 2 practices received larger enhanced payments and a replacement of some fee-for-service (FFS) payments with prospective payments in recognition of the additional care delivery changes they are required to make to better serve patients with complex needs. Moreover, Track 2 practices partnered with health IT vendors that agreed to help them use health IT to support comprehensive primary care. This chapter describes the supports that payers and vendors provided.

We found that the intensity of support varied across payers and vendors, but overall, practices received a substantial amount of CPC+ support in 2017.

- **Payments.** CMS and 93 percent of the 61 other payers that partnered with CMS for all of 2017 provided practices with enhanced payments for participating in CPC+ in addition to usual payments for services, most commonly in the form of care management fees. In 2017, the median care management fees practices received from CMS and other payers exceeded $88,000 per Track 1 practice and $195,000 per Track 2 practice. In addition to care management fees, CMS and most other payers also provided CPC+ practices with payments to reward performance on utilization of service, cost, and/or quality-of-care measures. In 2017, CMS and nine other payers also provided Track 2 practices with prospective payments for services that moved away from FFS. Although the remaining payers agreed to implement alternatives to FFS payments by January 2018, most payers reported that they were unlikely to actually do so by the deadline.
- **Data feedback.** CMS and 90 percent of other payers provided practices data feedback on utilization of service, quality of care, and/or cost of care in 2017.
- **Learning activities.** CMS and 84 percent of other payers provided learning support. CMS learning activities aimed to provide practices with needed information and resources and to promote peer learning among CPC+ practices.
- **Health IT support.** During 2017, health IT vendors focused on developing new electronic clinical quality measure (eCQM) reporting dashboards for CPC+. Many health IT vendors also engaged with practices in both tracks through CPC+-sponsored learning activities.

Although support for CPC+ practices was substantial in 2017, many CPC+ practices indicated that they needed additional funding and/or more guidance from payers and vendors to meet all CPC+ requirements.

In this chapter, we describe the supports provided by Medicare FFS and the 61 other payers that partnered in CPC+ for the duration of 2017. (Our second annual report will include a

discussion of the supports provided by the 16 payers that joined CPC+ in 2018.) In Section 3.1, we provide an overview of our findings. In Section 3.2, we describe the methods used for our analyses. In Sections 3.3 to 3.5, we provide detailed descriptions of the CPC+ payments, data feedback, learning activities, and health IT support. For each type of support, we outline what payers and health IT vendors offered to CPC+ practices, describe how practices perceived and/or used those supports, and highlight how supports can be improved for future years of CPC+.

## 3.1. Key takeaways on CPC+ supports to practices

### 3.1.1. Enhanced and alternative payments to CPC+ practices

- CMS and the other CPC+ payers agreed to provide CPC+ practices with enhanced payments, in addition to usual payments for services, to (1) support their participation in CPC+ and (2) incentivize them to improve quality, decrease utilization, and/or reduce costs. Additionally, for Track 2 practices, CMS and other payers agreed to implement an alternative payment approach that, by shifting away from an FFS model, allows practices more flexibility in who provides care and where they deliver care.

  1. **Enhanced payments for participating in CPC+ *in addition to usual payments for services.*** CMS and 93 percent of other CPC+ payers provided practices with this type of payment in 2017, most commonly in the form of care management fees. (The four payers that did not meet their commitment to provide CPC+ practices with this additional financial support in 2017 generally contracted with few CPC+ practices and had few lives attributed to CPC+ practices.) Medicare FFS and half of other payers provided higher care management fees to Track 2 practices than Track 1 practices in recognition of their additional required care delivery activities, which focus on patients with complex needs.

     Taken together, care management fee payments from Medicare FFS and other payers were substantial. In 2017, the median care management fees practices received from CMS and other payers for participating in CPC+ exceeded $88,000 per Track 1 practice, which translates to $32,000 per practitioner, $105 for patients attributed to practices by CPC+ payers for payment purposes ($8.75 per-member per-month [PMPM]), or $27 per patient (regardless of attribution or insurance status; $2.28 PMPM). These payments exceeded a median of more than $195,000 per Track 2 practice, which translates to $53,000 per practitioner, $135 per patient attributed to practices by CPC+ payers ($11.25 PMPM), or $44 per active patient ($3.69 PMPM). Medicare FFS provided a large proportion of the funding practices received from CPC+ care management fees, both in terms of total payments and those unique to CPC+.

     - **Total care management fees.** Although Medicare FFS accounted for only 36 percent of attributed CPC+ patients, it provided 76 percent of all care management fees to practices in 2017. CMS contributed this large share of care management fees because of its relatively high per-beneficiary per-month (PBPM) amounts. The average care management fees from CMS of $15 PBPM for Track 1 and $28 for Track 2 were substantially higher than the median fees from other payers, which ranged from $3 to $5 PMPM for Track 1 and $4 to $6 for Track 2, depending on the line of business.

- **Unique care management fees.** CMS is providing CPC+ practices with care management fees that are not available to non-CPC+ practices. However, most other payers provided similar payment supports to CPC+ practices as they did to non-CPC+ practices that participated in their other primary care transformation initiatives. The 24 percent of total care management fees that non-Medicare FFS payers provided can be split into approximately 4 percent that was unique for CPC+ and 20 percent that was also provided to non-CPC+ practices and would have been available to at least some CPC+ practices even if CMS had not launched CPC+ through these other initiatives.

2. **Payments that reward practices for improving quality, decreasing utilization, and/or reducing costs.** CMS used two strategies for rewarding performance: (1) practices not participating in the Medicare Shared Savings Program (SSP) were eligible to receive a prospectively paid Performance-based Incentive Payment (PBIP) from CMS that was retrospectively reconciled based on performance, whereas (2) practices participating in the Medicare SSP are part of an Accountable Care Organization (ACO) that participates in a shared savings program with Medicare FFS. Eighty-nine percent of other CPC+ payers also rewarded practices for performance in 2017, most commonly through retrospective bonus payments (67 percent of payers) and/or shared savings opportunities (49 percent of payers). Just under half of payers offering payments for performance (46 percent) reported that they calculated payments using at least some of the same performance metrics that CMS uses for its PBIP.

3. **For Track 2 practices, payments for services that increase practices' flexibility by shifting away from FFS toward prospective, non-visit-based payments.** CMS shifted away from FFS for Track 2 practices in 2017, using a hybrid approach that replaces a portion of FFS payments for certain evaluation and management (E&M) services with the prospective payment—referred to as the Comprehensive Primary Care Payment (CPCP). In 2017, most Track 2 practices elected to have only 10 percent of those payments paid prospectively; in later years of CPC+, they will be required to select progressively higher percentages.

   In 2017, nine (15 percent) of the other payers were using an alternative payment approach for Track 1 and Track 2 practices. Those approaches differed from CMS' hybrid approach. Most commonly, these payers were using full or near-full capitation. The remaining payers that began CPC+ in 2017 agreed to implement an alternative to the FFS approach by January 2018 for at least Track 2 practices. In 2017, many were working to develop alternative approaches; however, most payers expressed hesitation about moving away from FFS and reported that they would not do so by January 2018. Payers commonly cited as major barriers practices' reluctance and/or lack of readiness to accept alternative payments and the cost of switching claims processing systems to accommodate alternative payments.

- More than three-quarters of practices reported that CPC+ payments were somewhat useful or very useful for improving primary care. Practices reported using these payments to make substantial, beneficial changes, most commonly by hiring new staff such as care managers.

However, practices also commonly raised the following concerns regarding CPC+ payments:

- Only 41 percent of Track 1 practices and 51 percent of Track 2 practices indicated that CPC+ funding from Medicare FFS was adequate or more than adequate for them to complete the work required by CPC+. Practices were less likely to report receiving adequate support for practice change from other payers than they were from Medicare FFS. CPC+ practices reporting that payments from Medicare FFS and other payers were less than adequate to complete the work required by CPC+ received lower median care management fees and were more likely to report that meeting CPC+ requirements was burdensome than practices reporting that payments were adequate or more than adequate.
- Several of the 27 deep-dive practices interviewed about CPC+ payments[22] regarded the CPC+ requirement to change care delivery for all their patients as burdensome and unfair given that Medicare FFS provided a large proportion of the funding they received from CPC+ care management fees.
- When describing their perceptions of how incentive payments would work prior to receiving them, most deep-dive practices expressed pessimism about their ability to earn PBIPs or shared savings payments from CMS; they also did not take concrete steps to try to do so. Many practices reported frustration that payers' approaches to rewarding performance were complex and not well aligned, making it hard for practices to know where to focus their quality improvement efforts and set performance goals.
- Among Track 2 practices, practices were hesitant about taking on financial risk by shifting from an FFS model to prospective payments and confused about how CMS calculated the CPCP payments and how practices could spend them.

### 3.1.2. Data feedback for CPC+ practices

- CMS and 90 percent of participating payers provided CPC+ practices with data feedback in 2017. Most commonly, CMS and other payers are providing data on a combination of service use, cost, and/or quality-of-care measures. Payers typically showed trends in these measures over time and provided comparisons with benchmarks (such as other practices in the region). Other data commonly reported by CMS or other payers included expenditure data for a given specialist or hospital, lists of patients with care gaps or high utilization patterns, and patient demographic information.

- To streamline data review and make it more actionable for practices, CMS and the other payers committed to developing a common approach to quality measurement and data feedback. We grouped regions' progress toward data aggregation, in which payers submit

[22] We interviewed 81 CPC+ practices (referred to as "deep-dive practices") about their experiences with CPC+ in 2017. We used three to four interview modules to guide our discussions with each deep-dive practice; thus, we have detailed information on each Comprehensive Primary Care Function and CPC+ support from about 30 diverse practices.

their claims data to a third-party vendor that produces a single tool analyzing and presenting that data into the following general categories:

- **Did not pursue aggregation** in 2017 either because payers determined that the costs of doing so outweighed the benefits (New York and New Jersey) or because regions were focused on other efforts, such as a regional Health Information Exchange (HIE; Montana, Kansas City, and Rhode Island).
- **Took steps toward aggregating data** in 2017, such as discussing measure alignment or selecting a data aggregation vendor (Arkansas, Oregon, Hawaii, Michigan, and Philadelphia).
- **Provided aggregated data feedback** to practices in 2017 (Colorado, Tennessee, Ohio/Northern Kentucky, and Oklahoma). Medicare FFS joined regional aggregation efforts in the three of these regions that had aggregated data in CPC Classic—Colorado, Ohio/Northern Kentucky, and Oklahoma. All payers in Tennessee except Medicare FFS aggregated data as part of a state Medicaid initiative (these payers participate in CPC+ only for their Medicaid lines of business).

- Although practices varied in the frequency with which they reviewed payer data feedback, almost all CPC+ practices reported on the 2018 CPC+ Practice Survey that they made one or more changes to how they deliver care in response to it. Around half of CPC+ practices reported making a major change. During interviews, practices frequently reported that they used practice- or system-level data feedback from CMS and other payers to prioritize areas for quality improvement work and patient-level data to identify patients with care gaps or at high risk.

- Both CPC+ payers and practices reported limitations to payer data feedback. Several CPC+ payers described efforts to make their feedback more usable by reducing claims processing times, incorporating data from additional sources (such as electronic health records [EHRs]) along with claims data feedback, seeking input from practices on feedback content and structure, and offering technical assistance to help practices use data.

### 3.1.3. Learning activities for CPC+ practices

- CMS and its contractors provided learning supports to CPC+ practices. These learning activities aimed to (1) provide practices with needed information and resources and (2) promote peer learning among CPC+ practices. In response to the 2018 CPC+ Practice Survey, 82 percent of practices indicated that the CPC+ learning community was doing a good, very good, or excellent job at meeting their CPC+-related needs and helping them improve primary care, with 17 percent of practices rating those services as excellent. Specifically, the CPC+ learning community provided three types of supports:

  1. **Information dissemination tools**, including an implementation guide, a web-based platform to support collaboration among CPC+ stakeholders (including practices, CMS, other payers, and health IT vendors), and a weekly electronic newsletter. Deep-dive practices generally reported that these supports were useful guides for implementing CPC+. Most also reported that the amount of information provided was overwhelming and difficult to sift through.

2. **Group learning activities**, including (a) national webinars to disseminate detailed information to CPC+ practices; (b) cross-regional learning groups to promote peer learning among practices working on similar CPC+-related changes or facing similar health IT challenges; and (c) virtual and in-person national and regional learning sessions. In general, practices reported that group learning sessions were most helpful when they provided opportunities to learn from and network with other practices and guidance tailored to a type of practice (such as rural, independent) or a given practice role (such as care manager).

3. **Tailored one-on-one and small group support**. If CPC+ practices have questions about CMS' CPC+ payment methodology, CPC+ participation or reporting requirements, or any other aspect of CPC+, they can contact a centralized CPC+ help desk by email or phone. Additionally, the Regional Learning Network (RLN) practice facilitators provided tailored support to individual practices or small groups of practices identified as needing additional coaching either over the phone or during site visits. To identify practices that needed coaching, the RLN leadership used data on care delivery transformation that practices reported to CMS and Medicare FFS cost and utilization data to categorize highest priority practices (those needing the most assistance; 10 percent per region), moderate-priority practices (35 percent per region), and low-priority practices (55 percent per region). At a minimum, the RLN was expected to provide telephone coaching to medium-priority practices and site visits to the highest priority practices. Practices were first categorized in June and then again in October. The RLN categorized 16 percent of practices as highest priority at least once in 2017; 91 percent of these practices received a site visit between July and December 2017. The RLN also provided in-person site visits to 71 percent of moderate- and low-priority practices.

- Eighty-four percent of other payers provided technical assistance or learning support directly to practices for CPC+ or as part of their other programs to support practice transformation—despite not committing to do so for CPC+. In responding to the 2018 CPC+ Practice Survey, around half of CPC+ practices that contracted with non-Medicare FFS payers reported that in the prior six months they had received training from non-Medicare FFS payers in how to use data feedback and/or coaching to improve practice processes and workflows. Just over half of payers providing technical assistance or learning support indicated that their efforts were coordinated with CMS' CPC+ learning activities.

### 3.1.4. Health IT support for CPC+ practices

- In 2017, CMS outlined seven enhanced health IT functionalities that Track 2 practices would need to use to support the five Comprehensive Primary Care Functions, two each related to the functions of access and continuity and care management, and one each for the remaining functions (comprehensiveness and coordination, patient and caregiver engagement, and planned care and population health). The original deadlines for using health IT to support care varied by function. CMS set the earliest for July 2018. (In 2018, CMS refined the CPC+ health IT requirements and delayed some deadlines.)

- In 2017, Track 2 practices partnered with approximately 66 health IT vendors that agreed to help them meet these requirements; we interviewed a diverse sample of 13 of those vendors (representing 83 percent of Track 2 practices).

- Many vendors that we interviewed indicated that they had features available in their products prior to the start of CPC+ that could support practices' work on each of the five Comprehensive Primary Care functions. Most vendors reported that they had more advanced functionality to support empanelment and risk stratification at the outset of CPC+ than to support other aspects of CPC+.

- All health IT vendors that we interviewed indicated that they had made improvements to their health IT functionality to better support CPC+ practices and/or planned to do so in future years. During the first year, health IT vendors focused most on developing new eCQM reporting dashboards for CPC+. Many vendors reported plans to adjust their care plan templates to include all fields required for CPC+. However, vendors also reported challenges to improving their products including a lack of corresponding clinical or industry standards (such as preferred risk-stratification algorithms), competing organizational priorities, and an unclear business case for CPC+-specific enhancements that vendors felt non-CPC+ practices were unlikely to use.

- Roughly half the vendors we interviewed reported that they collaborated with Track 1 and Track 2 practices during CMS-sponsored CPC+ learning activities. Larger vendors (those working with 100 or more CPC+ practices) were more likely to attend CPC+ learning activities than smaller vendors. Vendors indicated that these activities provided a useful venue for educating practices about existing functionalities and an opportunity for practices to provide feedback on how to improve health IT products so they better support the CPC+ Comprehensive Primary Care Functions.

- Practices had mixed views of health IT vendor support. About half of CPC+ practices (48 percent in Track 1; 55 percent in Track 2) reported on the 2018 CPC+ Practice Survey that health IT vendor support was somewhat or very useful for improving primary care. This finding contrasts with the 75 percent or more of practices reporting that other CPC+ supports—including financial support, data feedback, and learning support—were useful. Practices most satisfied with health IT support indicated that their vendors had developed new product enhancements for CPC+ and/or were responsive to questions about their products.

## 3.2. Methods

This chapter draws on a range of data sources. Our survey of CPC+ payers and interviews with CMS, its contractors, other payers, and health IT vendors conducted from October to December 2017 provided insight into the supports provided to CPC+ practices. Fifty-two out of the 61 payers responded to the survey. All payers and a diverse sample of 13 of the 66 health IT vendors (representing 83 percent of Track 2 practices) participated in an interview. We also used CMS data on CPC+ payments and practice-reported financial data to study the magnitude of CPC+ payments. In addition, we observed learning activities and reviewed CPC+ program documentation, which included samples of data feedback from Medicare and other payers and

information on when learning activities were held and how they were structured. To understand practices' use of and perspectives on CPC+ supports, we drew on the following sources: (1) program documentation indicating which practices downloaded data feedback and attended learning activities; (2) a survey of all CPC+ practices fielded in summer 2018 that asked about practices' perspectives on CPC+ supports received in the prior year (Appendix 3.A); and (3) interviews conducted in spring 2018 with 83 deep-dive practices selected for intensive study. We divided our deep-dive interview protocol into a set of modules, including separate modules focused on payment, data feedback, and learning activities and one on each of the five Comprehensive Primary Care Functions—each of which included questions on health IT vendor support. Approximately 30 practices, split relatively evenly across tracks and SSP status, received each module.

Although we explore practice and other stakeholder perceptions on the value and benefits of payments, data feedback, learning activities, and health IT support, the model was not designed to disentangle the association between any particular support (such as the availability of aggregated data feedback across payers) and practice transformation outcomes, relative to other practice supports—given that supports were provided to participating practices as a package.

## 3.3. Enhanced and alternative payments to CPC+ practices

CMS selected regions for CPC+ where private and public payers' payment approaches aligned with CMS' approaches to ensure that each participating practice receives enhanced and/or alternative payments for a substantial share of its patients. Specifically, CMS and its payer partners agreed to provide the following types of payments: (1) enhanced payments for participating in CPC+ in addition to usual payments for services; (2) payments that reward practices for improving quality, decreasing utilization, and/or reducing costs; and (3) for Track 2 practices, payments for services that shift away from FFS toward prospective, non-visit-based payments. In this section, we first provide an overview of the payment approaches used by CPC+ payers to accomplish these goals and describe practices' overall perception of the adequacy of those payments and how they used them. We then provide additional detail on each payment type.

### 3.3.1. Overview of CPC+ payments

#### Which payers are providing enhanced or alternative payments for CPC+?

CMS and 57 of the 61 other payers (93 percent) that participated in CPC+ for 2017 provided practices enhanced and/or alternative payments to support comprehensive primary care. The four payers that did not provide CPC+ practices this additional financial support generally contracted with few CPC+ practices, had few lives attributed to CPC+ practices, and had limited, if any, experience in value-based contracting. In 2017, one of these payers noted that it was helpful to learn about the payment approaches being used by other CPC+ payers in their region before it implemented new payment approaches. Two of the payers that did not offer payment supports in 2017 withdrew from CPC+ in early 2018.

## What payment approaches are payers using?

CMS and the other CPC+ payers agreed to provide CPC+ practices with enhanced payments in addition to usual payments for services to (1) support their participation in CPC+ and (2) incentivize them to improve quality, decrease utilization, and/or reduce costs. Additionally, for Track 2 practices, CMS and other payers agreed to implement an alternative payment approach that, by shifting away from an FFS model, allows practices more flexibility in who provides care and where they deliver care.

CPC+ payers provided enhanced and alternative payments for the patients that they attributed to CPC+ practices. CMS partnered with other payers, because it theorizes that if a CPC+ practice receives enhanced and alternative payments for a critical mass of its patients, it will be able to transform its whole practice. With this goal in mind, CMS requires CPC+ practices to implement changes across all of their active patients regardless of whether the patient is attributed to the practice by Medicare or other CPC+ partner payers. In 2017, as part of their care delivery and financial reporting to CMS, practices reported that a median of 35 percent of their active patients were attributed to them by Medicare FFS and other CPC+ payers, though the proportion attributed varied. One-quarter of practices reported that 21 percent or less of their active patients were attributed to them. Practices in the highest quartile reported 50 percent or more of their patients were attributed to them. Patients may not be attributed if they are (1) uninsured; (2) insured by a non-partnering payer; or (3) insured by a partnering payer but not attributed to the practice (for example, if they saw another practice more frequently or more recently or if they are covered under a non-participating line of business).

CMS and the other payers that provided CPC+ practices enhanced and/or alternative payments in 2017 used a variety of payment approaches. We organized our discussion of these approaches by the three payment categories that CMS and other CPC+ payers agreed to provide:

1. **Enhanced payments for CPC+ participation *in addition to usual payments for services*.** CMS and other payers agreed to start providing practices these payments in 2017 to allow practices to invest in the infrastructure, staffing, and training necessary for delivery of the five Comprehensive Primary Care Functions. At least a portion of these payments are made to practices for participating in CPC+ and are *not* based on a practice's performance on cost, utilization, or quality metrics.
   - CMS provided practices prospective care management fees for attributed Medicare FFS beneficiaries, an average of $15 PBPM for Track 1 and $28 PBPM for Track 2. (See Table 3.1 and Section 3.3.2 for details on CMS' payment approaches.)
   - Most other payers (93 percent) also provided practices enhanced payments (Table 3.2). All but one of these payers provided practices enhanced payments in the form of care management fees (which were typically lower than those provided by CMS; see Table 3.3). The other payer increased CPC+ practices' FFS rates to account for their participation in CPC+, a payment approach called "enhanced FFS."

2. **Payments that reward practices for improving quality, decreasing utilization, and/or reducing costs.** Similar to enhanced, non-visit-based payments, payers agreed in their memoranda of understanding (MOUs) with CMS to begin rewarding practices for their performance during the first year of CPC+.

- CMS used two strategies for rewarding performance:
    - Practices not participating in SSP were eligible to receive a prospectively paid PBIP from CMS that was retrospectively reconciled based on performance.
    - Practices participating in SSP as part of an ACO that participates in a shared savings program with Medicare FFS were not eligible for PBIPs. If the ACO earns shared savings, it decides whether and how to distribute it to its providers.
- Most other payers (89 percent) also offered practices the opportunity to earn payments based on their cost, utilization, or quality performance in 2017. Payers most commonly used retrospective bonus payments (67 percent of payers) and/or shared savings opportunities (49 percent of payers) to reward practice performance.

3. **Payments for services that shift away from FFS toward prospective, non-visit-based payments.** By shifting away from FFS, these payments support the provision of comprehensive primary care by members of the care team that cannot normally bill for services (such as care coordinators) and provide practices the flexibility to deliver care outside of traditional billable visits (such as through home visits, virtual visits, or group visits).
    - CMS shifted away from FFS for Track 2 practices at the start of 2017, using a hybrid approach that replaces a portion of FFS payments for certain services with a prospective payment.
    - Other payers that started CPC+ in 2017 agreed to implement an alternative to FFS approach by January 2018 for Track 2 practices. In 2017, nine other payers (15 percent) were using an alternative payment approach for Track 1 and Track 2 practices. All had already been doing so before CPC+, and most commonly doing so using full or near full capitation for primary care professional services. In 2017, many other payers were working to develop alternative approaches; however, most payers reported that they would not do so by January 2018.

## Table 3.1. Medicare FFS's CPC+ payment approaches, Tracks 1 and 2

| Type of payment | Payment characteristic | Track 1 | Track 2 |
|---|---|---|---|
| **Enhanced payments for CPC+ participation in addition to usual payments for services [a]** | | | |
| **Care management fees** | Frequency and mode | Quarterly, prospective | Quarterly, prospective |
| | Conditions | • Practices receive a PBPM payment for each attributed Medicare FFS beneficiary<br>• The PBPM is risk-adjusted[b] | • Practices receive a PBPM payment for each attributed Medicare FFS beneficiary<br>• The PBPM is risk-adjusted[b] |
| | Amounts | $15 average per PBPM<br>Tier 1: $6<br>Tier 2: $8<br>Tier 3: $16<br>Tier 4: $30<br>Tier 5: n/a | $28 average PBPM<br>Tier 1: $9<br>Tier 2: $11<br>Tier 3: $19<br>Tier 4: $33<br>Tier 5: $100 |
| **Payments that reward cost, utilization, and/or quality performance[c]** | | | |
| **For non-SSP practices** | | | |
| **Performance-based Incentive Payment (PBIP)** | Frequency and mode | Annual, paid prospectively at the start of an intervention year and then reconciled based on performance during that year | Annual, paid prospectively at the start of an intervention year and then reconciled based on performance during that year |
| | Conditions | • Practice does not participate in Medicare SSP<br>• The prospective payment is based on the number of beneficiaries attributed to the practice<br>• The amount of the payment retained following reconciliation is based on the practice's performance on patient experience-of-care measures, clinical quality measures, and utilization measures | • Practice does not participate in Medicare SSP<br>• The prospective payment is based on the number of beneficiaries attributed to the practice<br>• The amount of the payment retained following reconciliation is based on the practice's performance on patient experience-of-care measures, clinical quality measures, and utilization measure |
| | Amounts | Practices can retain up to $2.50 PBPM<br>• $1.25 PBPM based on quality/patient experience of care<br>• $1.25 PBPM based on utilization | Practices can retain up to $4.00 PBPM<br>• $2.00 PBPM based on quality/patient experience of care<br>• $2.00 PBPM based on utilization |

**Table 3.1.** ***(continued)***

| Type of payment | Payment characteristic | Track 1 | Track 2 |
|---|---|---|---|
| **For SSP practices** | | | |
| **Shared savings/shared losses** | Frequency and mode | Annual, retrospective payment to the practice's Medicare SSP ACO (not to the individual practice or provider) | Annual, retrospective payment to the practice's Medicare SSP ACO (not to the individual practice or provider) |
| | Conditions | • Practice belongs to a Medicare SSP ACO<br>• Practice's Medicare SSP ACO realizes savings relative to its unique target<br>• Practice's Medicare SSP ACO must meet established quality performance standards | • Practice belongs to a Medicare SSP ACO<br>• Practice's Medicare SSP ACO realizes savings relative to its unique target<br>• Practice's Medicare SSP ACO must meet established quality performance standards |
| | Amounts | The proportion of savings that SSP ACOs are eligible to receive varies depending on their SSP track (SSP tracks are different than the tracks used for CPC+). It is up to the ACO to decide whether and how much to share with its various providers. | The proportion of savings that SSP ACOs are eligible to receive varies depending on their SSP track (SSP tracks are different than the tracks used for CPC+). It is up to the ACO to decide whether and how much to share with its various providers. |
| **Payments for services that shift away from FFS toward prospective, non-visit-based payments** | | | |
| **Hybrid approach, prospective CPCPs and reduced FFS** | Frequency and mode | None; Track 1 practices receive regular Medicare FFS payments. | Prospective PBPM payments paid quarterly (called CPCP payments) with a corresponding reduction in FFS payments for selected E&M visits |
| | Conditions | Not applicable | • Practices select a percentage of E&M payments to receive prospectively through the CPCP[d]<br>• Practices receive PBPM CPCPs for each attributed beneficiary |
| | Amounts | Not applicable | • CPCP component: based on practice's average E&M visits during a historical period; this amount is increased by 10 percent to account for CPC+ practices' greater focus on comprehensiveness of care<br>• FFS component: FFS payments for some types of E&M visits are decreased by the CPCP percentage selected by the practice |

Sources: Centers for Medicare & Medicaid Services. "CPC+ Payment Methodologies: Beneficiary Attribution, Care Management Fee, Performance-based Incentive Payment, and Payment Under the Medicare Physician Fee Schedule." Version 2, February 17, 2017. Available at https://innovation.cms.gov/Files/x/cpcplus-methodology.pdf.

**Table 3.1.** ***(continued)***

Centers for Medicare & Medicaid Services, Medicare Shared Savings Program. "Shared Savings and Losses and Assignment Methodology." Version 5, April 2017. Available at https://www.cms.gov/Medicare/Medicare-Fee-for-Service-Payment/sharedsavingsprogram/Downloads/Shared-Savings-Losses-Assignment-Spec-V5.pdf.

[a] CMS qualified CPC+ and Medicare SSP as Advanced Alternative Payment Models (APMs) under the Medicare Quality Payment Program. As such, most SSP and non-SSP CPC+ practitioners will also receive a bonus payment (calculated as 5 percent of their payments for Part B professional services in the year prior to payment) for their participation in these programs. These payments will be made in 2019 for 2017 program participation. For more information on the Quality Payment Program, visit https://qpp.cms.gov/.

[b] CMS generally uses Hierarchical Condition Category (HCC) scores to determine risk tiers for care management fee payments, and calculates the HCC cut points for each tier at the region level. Beneficiaries are assigned to one of four risk tiers for Track 1 or one of five risk tiers for Track 2. At the regional level, 25 percent of beneficiaries are assigned to each of the Track 1 risk tiers. For Track 2 practices, 25 percent of beneficiaries fall into each of the first three risk tiers; 15 percent are in the fourth tier; and patients whose HCC score is at the 90th percentile or above or who have a dementia diagnosis fall into the highest (fifth) tier—the "complex" tier. Beneficiaries will be assigned new risk tiers in July of each intervention year.

[c] Medicare FFS is using a prospective PBIP for CPC+. However, this payment is available only to practices that do not participate in the Medicare SSP. Practices participating in both CPC+ and SSP participate in a retrospective shared savings program as a member of a Medicare SSP accountable care organization.

[d] During the first year, Track 2 practices could choose for 10, 25, 40, or 65 percent of their payments for a subset of E&M visits to be made via the CPCP. By the final intervention year, practices must choose to receive either the 40 or 65 percent upfront CPCP percentage.

ACO = Accountable Care Organization; CPCP = Comprehensive Primary Care Payment; E&M = evaluation and management; FFS = fee-for-service; PBPM = per-beneficiary per-month; SSP = Medicare Shared Savings Program.

## Table 3.2. Payment approaches used by CPC+ payers in 2017

| Type of payment support | Used by CMS for Medicare FFS? | Percentage of non-Medicare FFS payers using approach (N = 61) [a] |
|---|---|---|
| **Enhanced payments for CPC+ participation in addition to usual payments for services** | ✓ | 93 |
| Care management fees | ✓[b] | 92 |
| Enhanced FFS payments, adjusted based on practice participation in CPC+ or another program[c] | | 2 |
| **Payments that reward cost, utilization, and/or quality performance** | ✓ | 89 |
| Prospective PBIP, reconciled based on practice performance | ✓ for non-SSP practices [d] | 5 |
| Retrospective bonus payments based on practice performance | | 67 |
| Retrospective shared savings program | ✓ for SSP practices [d] | 49 |
| Enhanced FFS payments, adjusted based on practice performance[c] | | 7 |
| **Payments for services that shift away from FFS toward prospective, non-visit-based payments** | ✓ for Track 2 | 15 |
| Capitation for most or all primary care services[e] | | 13 |
| Partial capitation for a subset of primary care services | | 2 |
| Prospective bundled payment | | 0 |
| Hybrid approach for some or all primary care services, prospective payments and reduced FFS | ✓ for Track 2 | 0 |

Sources: Mathematica's analysis of 2017 CPC+ Payer Survey data and payer interview data.

[a] Individual percentages may not sum to totals due to rounding and because subtypes of payments are not mutually exclusive.

[b] CMS qualified CPC+ and Medicare SSP as Advanced Alternative Payment Models (APMs) under the Medicare Quality Payment Program. As such, most SSP and non-SSP CPC+ practitioners will also receive a bonus payment (calculated as 5 percent of their payments for Part B professional services in the year prior to payment) for their participation in these programs. These payments will be made in 2019 for 2017 program participation. For more information on the Quality Payment Program, visit https://qpp.cms.gov/.

[c] Five payers made enhanced FFS payments in 2017. Those payments are classified as enhanced payments for the one payer that did not vary its payments based on practice performance, and as payments to reward performance for the four payers that varied their FFS schedule based on practice performance on cost, utilization, and/or quality measures.

[d] Medicare FFS is using a prospectively paid and retroactively reconciled PBIP for CPC+. However, this payment is available only to practices that do *not* participate in the Medicare Shared Savings Program (SSP). Practices participating in both CPC+ and SSP participate in a retrospective shared savings program as a member of a Medicare SSP accountable care organization.

[e] Under models that capitate most primary care services, a limited set of services, such as immunizations and screeners, may be reimbursed on an FFS basis.

FFS = fee-for-service; PBIP = Performance-based Incentive Payment.

### How do CPC+ payments compare with payments provided before CPC+ and with current payments for nonparticipating practices?

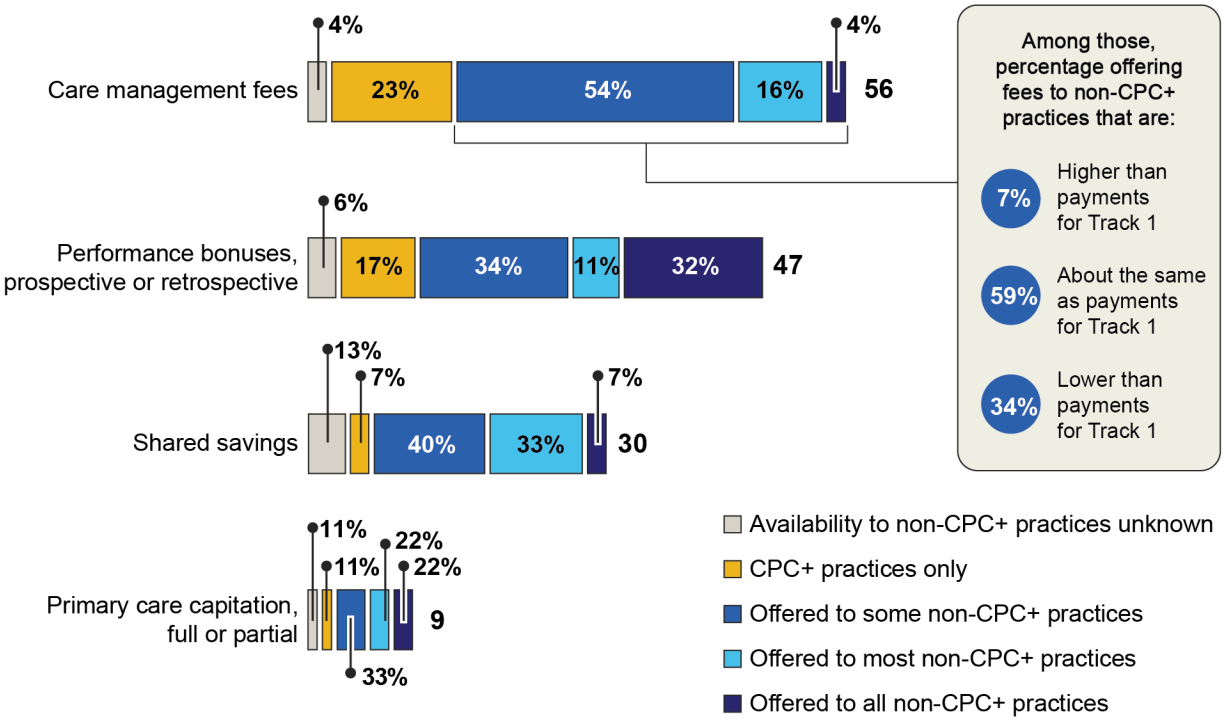
For CPC+, CMS built on lessons learned about enhanced and alternative payments during CPC Classic. As in CPC Classic, CMS provides CPC+ practices with care management fees for participation. Building on CPC Classic, CMS introduced a higher level of payment for Track 2 practices ($28 versus $15 for Track 1), to reflect the more advanced work required under that track. CMS also introduced two new payment approaches for CPC+: (1) the PBIP for practices not participating in SSP and (2) its hybrid FFS and CPCP payment approach for Track 2 practices. CMS' care management fees, PBIPs, and CPCP payments are not available to nonparticipating practices. In other words, by participating in CPC+, practices are receiving an infusion of additional funding for Medicare FFS beneficiaries and are exposed to new payment incentives.

Similar to CMS, most other payers had established initiatives to support primary care transformation prior to CPC+. However, unlike CMS, most of these payers did not adjust their payment approaches for CPC+ and provided similar payment supports to CPC+ practices as they did to non-CPC+ practices that participated in their established initiatives in CPC+ regions and, for some multiregion payers, non-CPC+ regions.

On the 2017 CPC+ payer survey, three-quarters of payers that offered care management fees to CPC+ practices reported that they also offered care management fees to at least some nonparticipating practices, with 20 percent reporting that most or all non-CPC+ practices received those payments (Figure 3.1). The payer survey asked payers to compare the level of care management fee payments for non-CPC+ practices with those for Track 1 practices; 59 percent of payers reported providing the same level of payments to nonparticipating practices and Track 1 practices. Moreover, around half of payers offering performance bonuses (43 percent), shared savings opportunities (40 percent), or capitation (44 percent) as CPC+ payments reported that *most or all* non-CPC+ practices also received these payments.

In some regions, payers had aligned their primary care transformation initiatives with each other prior to the start of CPC+ and were not planning changes to further align these initiatives with CMS' CPC+ payment approaches. Prior alignment among payers was most common in the Medicaid lines of business, where state Medicaid authorities in some regions took the lead in developing a common approach to payment supports that was carried out uniformly by all Medicaid managed care organizations (MCOs) in those states. For example, state Medicaid authorities in Ohio and Tennessee used State Innovation Model (SIM) grants to develop those states' Patient-Centered Medical Home (PCMH) and retrospective episode-based payment programs, and then set those payment models as their CPC+ approaches, without making further adjustments.

**Figure 3.1. Number of payers offering enhanced or alternative payments to CPC+ practices and, among those, the proportion also offering them to non-CPC+ practices**




Source: Mathematica's analysis of 2017 CPC+ Payer Survey data.

### How are payers starting to think about sustainability?

Payers' CPC+ payment approaches align with or build on established initiatives to support primary care transformation. Their continued sustainment of enhanced and alternative payments likely depends on whether those payments are generating practice changes that ultimately result in a return on investment (ROI) for a payer.

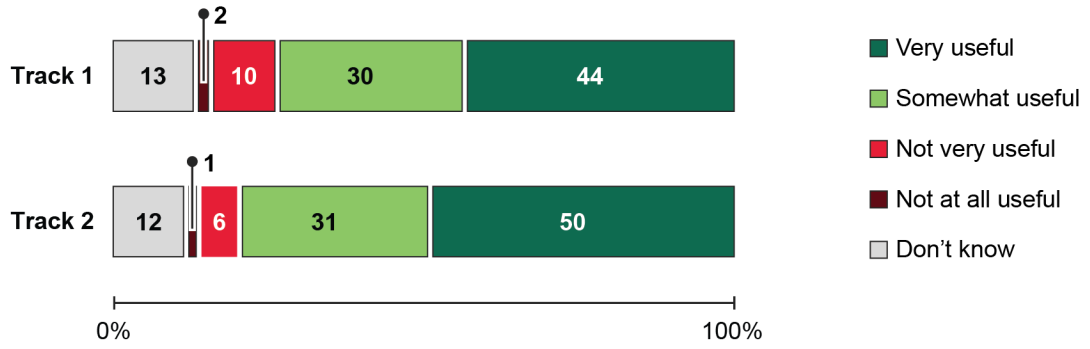
We interviewed payers about how they are evaluating the impact of CPC+ on their organization. Payers commonly reported that calculating an ROI for CPC+ specifically would be challenging given the difficulty of isolating the impact of CPC+ from other primary care transformation and payment reform initiatives. Instead, several payers plan to evaluate the ROI for their group of primary care transformation initiatives.

Some payers reported changing their financial support to practices in 2017 by adding additional enhanced payments, such as care management fees or quality bonuses (34 percent of payers) and/or offering new payments that move away from FFS models (12 percent of payers). However, most of these changes were made to their previously established initiatives and were implemented for both CPC+ and non-CPC+ practices. Five payers reported during interviews that they *did* make changes to their payment approaches for CPC+ and reported that they began providing care management fees for CPC+ practices (when they had not previously) or—if care management fees were already in place—began to provide CPC+ practices a higher care management fee than they provided to other practices.

## How do practices perceive of and use CPC+ payments?

On the 2018 CPC+ Practice Survey, 74 percent of Track 1 practices and 81 percent of Track 2 practices reported that CPC+ payments were somewhat useful or very useful for improving primary care (Figure 3.2). Echoing this view, most of the 27 deep-dive practices that were interviewed about CPC+ payments reported that those payments allowed them to make substantial, beneficial changes to the way they deliver care. More than half of practices that did not rate payments as useful indicated they were not familiar enough with CPC+ payments to rate their usefulness.

**Figure 3.2. Percentage of practices rating CPC+ payments as useful or not useful for improving primary care**




Source: Mathematica's analysis of 2018 CPC+ Practice Survey data.

Deep-dive practices reported primarily drawing on care management fees (as opposed to other CPC+ payments, such as prospective performance bonuses) to hire new staff or offer additional services in 2017. Most commonly, practices used these payments to provide new care management staff. Several practices also reported adding other staff, such as behavioral health specialists, clinical pharmacists, social workers, data analysts, dieticians, and quality improvement staff. Multiple practices also named the following services and activities as important new opportunities that CPC+ funding had allowed them to pursue: Patient and Family Advisory Councils (PFACs); implementation of risk-stratification models to identify patients needing additional support; and patient/caregiver education classes. One practice that had implemented telehealth highlighted its importance, noting that care coordinators can now better communicate with and provide social support to rural patients in particular. (Chapter 4 provides additional detail on how practices are implementing each of the Comprhensive Primary Care Functions and changing the way they deliver care.)

> **"It takes people to do the things required for transformation. In particular, the care management fee has allowed us to hire the people needed to manage our patients."**
>
> ***—CPC+ clinical quality analyst in a system-owned practice, 2018***

Most deep-dive practices that belonged to multi-site medical groups or health systems reported that CPC+ funds are budgeted at a centralized level. Of the many deep-dive practices that conducted centralized budgeting, the degree of input from the practice sites over the allocation of funds varied widely, with around half of systems and medical groups giving practice site-level managers some input into how the funds apportioned to their practice site

should be spent. Most systems or medical groups allocated CPC+ funds among participating practice sites according to the number of attributed lives; several also noted that a portion of the funds is retained by the health system or medical group to pay services that are operated centrally and shared across participating practice sites, such as data analysis or care management resources. Reflective of centralized budgeting processes, in response to the 2018 CPC+ Practice Survey, practices owned by a health system or hospital were more than twice as likely as independent practices to report that they were not familiar enough with CPC+ payments from CMS to rate their adequacy (16 percent of Track 1 and 14 percent of Track 2 practices owned by a system or hospital versus 7 percent of Track 1 and 5 percent of Track 2 independent practices).

Although most deep-dive practices reported using CPC+ funding to make substantial changes, many practices reported not having enough funding to complete all the work required by CPC+. In response to the 2018 CPC+ Practice Survey, only half of Track 2 practices reported that payments from Medicare FFS were adequate or more than adequate to complete the work required by CPC+, which was slightly more than the 41 percent of Track 1 practices that reported the same thing (Figure 3.3). Practices rating Medicare FFS payments as less than adequate received lower median care management fees than those who indicated that Medicare FFS payment support was adequate to complete work required by CPC+ ($129,395 versus $141,778 for Track 1 and $249,049 versus $291,602 for Track 2). Practices were less likely to report receiving adequate support for practice change from other payers than they were from Medicare FFS (Figure 3.3). Practices' ratings of payment adequacy did not differ by practice size (number of primary care practitioners), whether the practice was independent or owned by a health system or hospital, or whether the practice had participated in prior primary care transformation initiatives.[23]

**Figure 3.3. Percentage of practices reporting that CPC+ payments from Medicare FFS and other payers are adequate to complete work required by CPC+**


Source: Mathematica's analysis of 2018 CPC+ Practice Survey data.
FFS = fee-for-service.

[23] We define participation in prior primary care transformation initiatives as participation in CPC Classic or the Multi-payer Advanced Primary Care Practice demonstration or being a medical home (indicated by National Committee for Quality Assurance, The Joint Commission, Accreditation Association for Ambulatory Health Care, Utilization Review Accreditation Commission, or state medical-home recognition status).

CPC+ practices raised two concerns related to CPC+ payment adequacy:

1. **The level of work required for CPC+.** Around two-thirds of CPC+ practices reported that meeting CPC+ care delivery requirements was "somewhat" or "very" burdensome (49 and 17 percent, respectively). Practices that reported that CPC+ was burdensome were more likely than other practices to report that payments from Medicare FFS were less than adequate to complete the required work (79 percent versus 32 percent for Track 1 and 50 percent versus 31 percent for Track 2). A similar pattern was observed for practices' ratings of the adequacy of payments from other payers. (See Section 4.4 for more details on CPC+ practices' overall impressions of CPC+.)

2. **The level of payments from non-Medicare FFS payers.** Several deep-dive practices raised concerns that CPC+ payments came primarily from Medicare FFS. Among practices raising these concerns, several regarded the requirement to change care delivery for *all* their patients as burdensome and unfair, given that they were receiving no or few enhanced payments for their patients who were not Medicare FFS beneficiaries. These concerns seemed especially acute for family medicine practices, whose patient panels tend to include fewer Medicare patients. Specifically, practices noted:

   - **Lack of payer participation**. On the 2018 CPC+ practice survey, 25 percent of Track 1 practices and 18 percent of Track 2 practices reported that they received CPC+ payments only from CMS in 2017. A deep-dive practice that received no new financial support for CPC+ from payers other than CMS viewed CPC+ as a "single-payer" not "multi-payer" initiative.
   - **Lower care management fees.** One Track 2 deep-dive practice noted the disparity between the $28 average PMPM CMS pays for Medicare FFS patients and the $3 PMPM another payer makes on behalf of its attributed Medicare Advantage patients and commented that the other payer was not carrying its weight in supporting practice change. (See Section 3.3.2. for more detail on CPC+ payment levels from Medicare FFS and other payers.)

### 3.3.2. Detail on enhanced and alternative payments

#### A. Payments for CPC+ participation

**How did payers structure payments for CPC+ participation?**

CMS pays participating practices care management fees on a risk-adjusted PBPM basis, in addition to usual Medicare FFS payments.[24] CMS intends for practices to use care management fees to augment staffing and training to support care coordination and population health

[24] CMS qualified CPC+ as an Advanced Alternative Payment Model (APMs) under the Medicare Quality Payment Program. As such, most CPC+ practitioners will also receive a bonus payment (calculated as 5 percent of their payments for Part B professional services in the year prior to payment). These payments will be made in 2019 for 2017 program participation. For more information on the Quality Payment Program, visit https://qpp.cms.gov/.

management.[25] CMS assigns Medicare FFS beneficiaries to one of four risk tiers for Track 1 or one of five risk tiers for Track 2, generally based on Hierarchical Condition Category (HCC) scores. In recognition of the advanced care delivery changes that Track 2 practices are required to make to support the care of patients with complex needs, the average care management fee for Track 2 practices ($28 PBPM) is nearly twice the average care management fee provided for Track 1 ($15 PBPM). (Table 3.1 provides additional details on CMS' approach.)

Most other CPC+ payers (56 payers, 92 percent) also provided practices care management fees in 2017. (One other payer paid enhanced FFS rates to practices for their participation in CPC+.) Their median care management fees were lower than those provided by CMS, in part reflecting the lower average acuity level for their patients, and those fees varied widely by payer and line of business (Table 3.3). Sixty-four percent of payers providing care management fees risk-adjusted those payments. Most of these payers adjusted care management fees for population risk (for example, by using HCC scores). Several payers adjusted for demographic characteristics, such as patient age or sex.

**Table 3.3. CPC+ payers' average PMPM care management fees, by CPC+ track and line of business, 2017**

| Line of business | No. of payers providing CMFs | Track 1 | | Track 2 | |
|---|---|---|---|---|---|
| | | Range | Median | Range | Median |
| Medicare FFS | 1 | - | $15.00 | - | $28.00 |
| Commercial | 25[a] | $1.25–$10.88 | $3.00 | $2.00–$10.88 | $4.00 |
| Marketplace plan | 17[a] | $1.25–$10.88 | $4.00 | $2.00–$10.88 | $5.82 |
| TPA/ASO (self-insured) | 14[a] | $2.00–$10.88 | $4.50 | $2.00–$10.88 | $5.00 |
| Medicare Advantage | 15 | $1.00–$13.35 | $5.00 | $2.00–$19.00 | $6.00 |
| Medicaid/CHIP managed care | 25 | $0.90–$11.00 | $4.00 | $1.50–$25.00 | $4.00 |
| Medicaid/CHIP FFS | 6 | $1.25–$15.00 | $5.12 | $1.25–$34.00 | $5.00 |

Source: Mathematica's analysis of 2017 CPC+ Payer Survey data.

Note: For payers paying practices on a capitated basis, this table includes PMPM payments only if the payer made payments for program participation *in addition to* regular capitated payments for services.

[a] One payer participating in CPC+ for its commercial, marketplace, and TPA/ASO lines of business provided CMFs for only Track 1 practices. They are not included in the Track 2 CMF ranges or medians.

PMPM = per-member per-month; TPA = third-party administrator; ASO = administrative services only; CHIP = Children's Health Insurance Program; CMF = care management fee.

Although payers agreed to provide Track 2 practices higher care management fees than Track 1 practices in their MOU with CMS, half of payers paid practices in Track 1 and Track 2 the same level of payments. Payers were more likely to differentiate Track 1 and Track 2 payments for commercial lines of business than for Medicaid lines of business. For those payers differentiating their payments by track, care management fees for Track 2 practices were a median of 64 percent higher than fees for Track 1 payments. Generally, payers that chose not to vary payment amounts by CPC+ track explained that their CPC+ payment models were based on

[25] CMS placed some restrictions on how practices could use these payments. Practices cannot use Medicare FFS care management fees to pay for health IT hardware or software, durable medical equipment, diagnostic and imaging equipment, practitioner or staff bonuses, or any other product or service not directly related to implementing CPC+ care delivery requirements.

payment models they had already established under other primary care initiatives, which did not set different levels of care delivery requirements among participating practices.

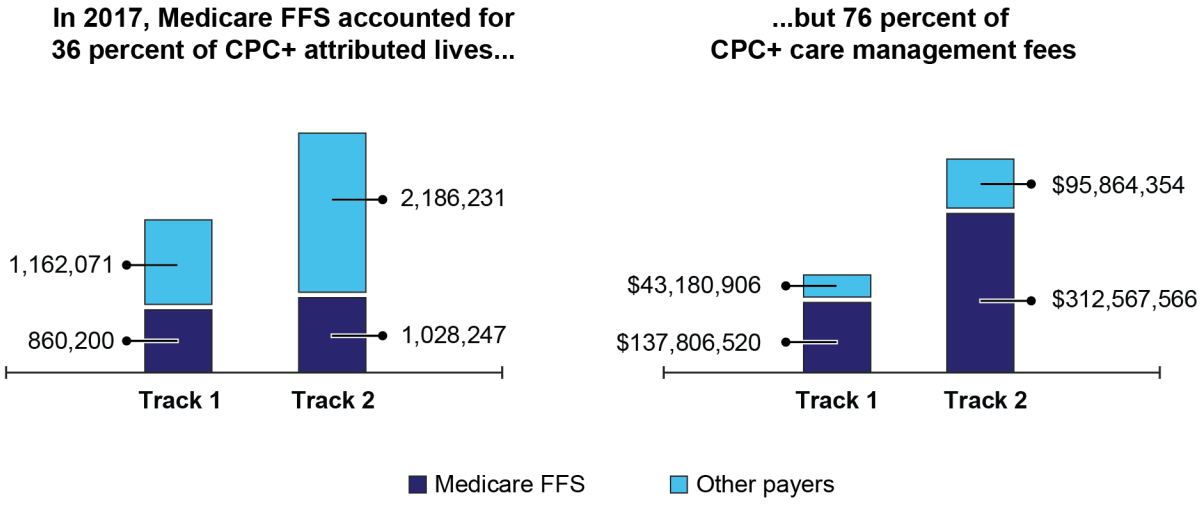
### How much funding did practices receive for participating in CPC+?

Practices reported that payments for participation, in the form of care management fees, accounted for a significant portion of their practice revenue. Specifically, care management fees from Medicare FFS and other payers accounted for an average of 7.5 percent of total practice revenue in 2017 for Track 1 practices and 11.4 percent for Track 2 practices.

Medicare FFS provided a large proportion of the care management fees, both in terms of total payments and those unique to CPC+. Reflecting this finding, several deep-dive practices perceived CPC+ to be primarily a Medicare FFS program.

- **Total payments.** Although Medicare FFS beneficiaries accounted for only 36 percent of patients attributed to CPC+ practices, Medicare FFS care management fees made up 76 percent of total CPC+ care management fees to practices (Figure 3.4).
- **Unique payments.** All of the care management fees provided by Medicare FFS were paid to practices specifically for participating in CPC+. Unlike Medicare FFS, most other payers are using the same payment approaches for CPC+ that they developed for other primary care transformation initiatives, and most of the care management fees that they provided to CPC+ practices were not unique to CPC+. The 24 percent of total care management fees that non-Medicare FFS payers provided can be split approximately into 4 percent that was unique for CPC+ and 20 percent that was also provided to non-CPC+ practices and would have been available to at least some CPC+ practices even if CMS had not launched CPC+ (Figure 3.5).

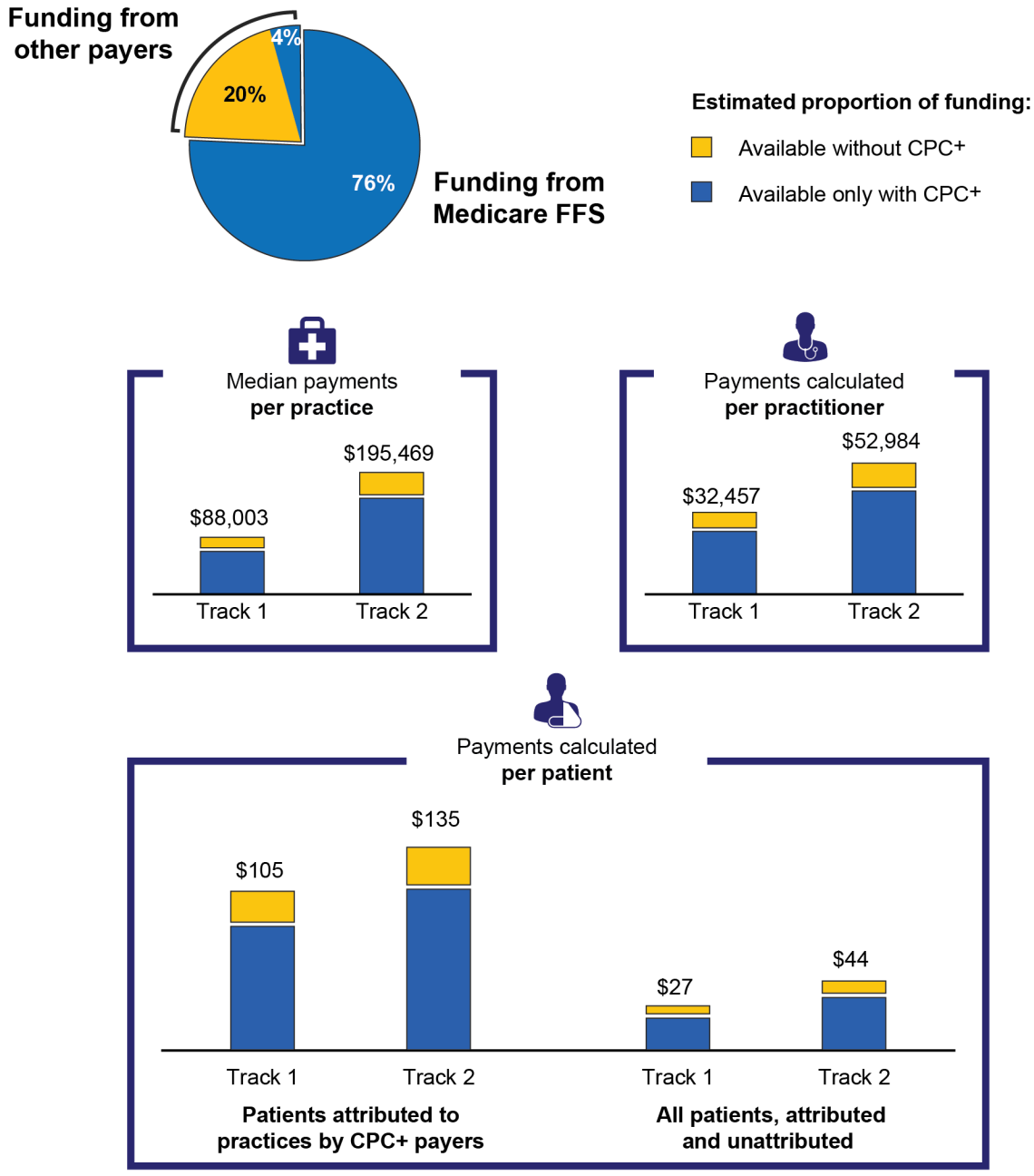
**Figure 3.4 Proportion of lives attributed by and care management fees provided by Medicare FFS and other payers**




Sources: Mathematica's analysis of 2017 practice-reported financial data submitted to CMS and Medicare FFS beneficiary attribution lists and payment data provided by CMS.

FFS = fee-for-service.

**Figure 3.5. Median care management fees paid by CMS and other payers from January to December 2017 and the estimated proportion of those fees available only to CPC+ practices**




Sources: Mathematica's analysis of 2017 practice-reported financial data submitted to CMS, Medicare FFS beneficiary attribution lists and payment data provided by CMS, and 2017 CPC+ Payer Survey data.

Note: Payments were made to practices. We calculate what they would have represented had they been made on a per-practitioner or per-patient basis. Median payments per practice, practitioner, and patient are reported for the year as a whole (January to December 2017).

FFS = fee-for-service.

Across CMS and other payers, median care management fees per practice were 45 percent higher for Track 2 practices than Track 1 practices, corresponding with the higher payments Medicare FFS and half of the other CPC+ payers made for those practices (Figure 3.5).

Payments to both groups of practices were substantial (Table 3.4):

- Track 1 practices reported receiving a median of more than $88,000 per practice in 2017. Calculated another way, this amount was $32,000 per practitioner in 2017, $105 for patients attributed to practices by CPC+ payers ($8.75 PMPM), or $27 per all attributed and unattributed patients ($2.28 PMPM).
- Track 2 practices reported receiving a median of more than $195,000 per practice in 2017. Calculated another way, this amount was $53,000 per practitioner, $135 per patient attributed to practices by CPC+ payers ($11.25 PMPM), or $44 for all attributed and nonattributed patients ($3.69 PMPM).

For both tracks, practices with a larger proportion of their patient panel attributed by Medicare FFS received higher median care management fees than practices with a smaller proportion of Medicare FFS beneficiaries. Given that other payers' PMPM payments are significantly lower than Medicare PBPM payments, the proportion of a practice's panel attributed by other payers matters less to the median care management fees. Similarly, although other practice characteristics, including practice size and location, were associated with the level of care management fees that practices received, that effect was considerably smaller than the effect of Medicare FFS penetration.

**Table 3.4. Median 2017 CPC+ care management fees per active patient per month, by practice characteristics**

| | Track 1 | Track 2 |
|---|---|---|
| **All practices** | **$2.28** | **$3.69** |
| **Percentage of patient panel attributed by Medicare FFS** | | |
| 0–10 | $1.10 | $2.20 |
| 11–20 | $1.95 | $3.74 |
| More than 20 | $3.74 | $6.34 |
| **Percentage of patient panel attributed by other payers** | | |
| 0–10 | $1.82 | $3.10 |
| 11–20 | $2.49 | $3.46 |
| More than 20 | $2.53 | $4.07 |
| **Participation in SSP** | | |
| SSP | $2.13 | $3.52 |
| Non-SSP | $2.35 | $3.85 |
| **Ownership** | | |
| Owned by a health system or hospital | $2.08 | $3.62 |
| Independent | $2.47 | $3.78 |
| **Number of primary care practitioners** | | |
| One to two | $2.81 | $4.12 |
| Three to five | $2.02 | $3.66 |
| Six or more | $1.92 | $3.41 |

**Table 3.4.** ***(continued)***

| | Track 1 | Track 2 |
|---|---|---|
| **Geographic location** | | |
| Rural | $3.06 | $4.91 |
| Suburban | $2.63 | $4.55 |
| Urban | $2.11 | $3.45 |

Sources: Mathematica's analysis of 2017 practice-reported financial data submitted to CMS and Medicare FFS beneficiary attribution lists and payment data provided by CMS.

Note: Active patients include attributed and unattributed patients. Mathematica used CMS-provided data to calculate the amount of care management fees Medicare FFS paid to practices and practice-reported data to calculate care management fees practices received from other payers.

FFS = fee-for-service.

## B. Payments to reward performance

### How did payers structure payments to reward performance?

Medicare's approach to rewarding practices for improving quality, decreasing utilization, and/or reducing costs varies depending on whether practices participate in CPC+ only or participate in both CPC+ and SSP. Practices participating in CPC+ only are eligible to receive CPC+ PBIPs. Practices participating in CPC+ and SSP are not eligible to receive CPC+ PBIPs and instead are rewarded for cost, utilization, or quality performance through their SSP shared savings/shared losses arrangement.

- **PBIPs for non-SSP practices.** For CPC+ practices that are not in SSP, Medicare prospectively pays practices in both tracks PBIPs at the start of each year. Then, after assessing practice-level performance at the end of the year, CMS asks practices to pay back the proportion of those payments that they did not earn. These bonus payments are based on the principle of loss aversion: prospectively paying practices and then requiring them to return payments as needed is expected to provide a stronger incentive than retrospective payments, because practices are expected to work harder to avoid losing payments they have already received. Practices must meet quality and utilization metrics to keep their full PBIPs:
  - The quality component consists of patient experience of care (measured by patient experience measures from the Consumer Assessment of Healthcare Providers and Systems [CAHPS] survey) and clinical quality (measured by eCQMs submitted by the practices). These measures cover *all patients in the practice, regardless of attribution or insurance status.*
  - The utilization component consists of claims-based measures of inpatient hospitalization and emergency department (ED) utilization for attributed Medicare FFS beneficiaries.
  - Track 1 practices can receive as much as $1.25 PBPM for each component, and Track 2 practices can receive as much as $2.00 PBPM for each component, for total PBIPs of up to $2.50 or $4.00 PBPM, respectively.

- **Shared savings for SSP practices.** CPC+ practices in SSP belong to a Medicare SSP ACO. Medicare compares their ACO's actual performance with an historical benchmark to determine whether the ACO qualifies to share in savings or is required to pay back losses (CMS Medicare SSP 2017). If savings are realized, payments are made to the ACO if it meets minimum performance standards on quality of care. The proportion of savings shared varies depending on an ACO's SSP track and quality performance. It is up to the ACO to decide whether to share any of these payments with its various providers and, if so, how much.

**Payment approaches used by other payers.** In 2017, 89 percent of other payers also had one or more payment approaches in place to reward practices for their cost, utilization, and/or quality performance (Table 3.2). Most of these approaches were in place prior to CPC+, and payers generally offered them to both CPC+ and non-CPC+ practices.

Most commonly, payers used retrospective bonus payment programs in which practices received payments at the end of a performance period if they surpassed cost, utilization, and/or quality benchmarks (67 percent of payers). Also common, half of all CPC+ payers used a shared savings approach. (Payers used different shared savings methodologies; Appendix Table 3.B outlines characteristics of their approaches.) Less frequently, payers reported that they enhanced FFS rates for practices that surpassed cost, utilization, and/or quality benchmarks (7 percent of payers) or used a prospectively paid and retroactively reconciled performance-based payment approach similar to CMS' approach for non-SSP practices (5 percent of payers).

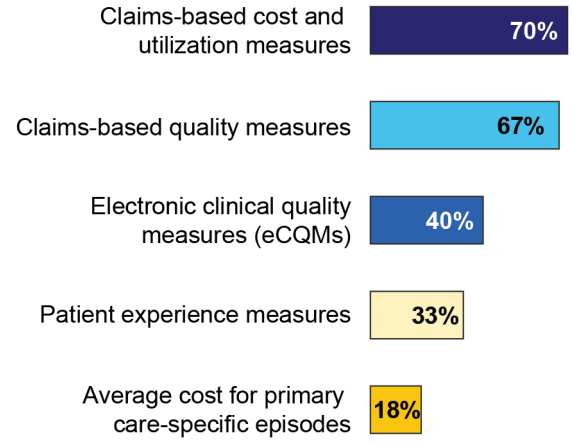
Twenty-five percent of payers offered more than one approach for rewarding practices for performance. In some cases, the same set of practices could earn payments through different incentive programs; in others, payers described using different performance-based approaches for different categories of practices. For example, Medicaid payers in one region—under the direction of the state Medicaid authority—all used a retrospective bonus program based on cost and quality metrics for low-volume practices and a shared savings program for high-volume practices (with 5,000 members per Tax Identification Number used as the cutoff between low-volume and high-volume practices). Similarly, a few large commercial payers described offering PCMH programs with retrospective bonus payments to smaller practices with fewer resources and less experience in transforming care, while offering ACO programs with shared savings opportunities primarily to larger and system-based practices.

**Metrics used by payers to calculate bonuses or shared savings eligibility.** Payers used a variety of metrics to calculate bonus payments or determine whether practices were eligible to participate in shared savings programs. Most commonly, payers offering these programs reported using claims-based cost and utilization measures (70 percent of payers with these programs) and claims-based quality measures (67 percent of payers using these programs) to assess practice performance (Figure 3.6). Other metrics—such as eCQMs, patient experience measures, and the average cost for primary care-specific episodes—were each used by 40 percent or fewer of all payers to calculate payments.

Just under half (46 percent) of payers offering payments for cost, utilization, or quality performance reported that they calculated payments using performance metrics that were aligned with Medicare FFS. Sixty-nine percent of payers align only some of their measures (compared with 31 percent that aligned on all measures).

Payers reported the following challenges to further aligning performance metrics for CPC+: (1) payers had developed their performance-based payment programs prior to CPC+; (2) payers are focused on measures used for health system rankings (such as for the National Committee for Quality Assurance's annual ratings of commercial health insurance plans); and (3) payers serve different patient populations. As one Medicaid MCO explained, "Our quality measures are slanted toward…preventive and primary care for kids and pregnant women, because that's a large share of our enrolled population…The measures that we judge providers on, those are the same measures that [the state] ultimately grades us on as a Medicaid managed care plan."

**Figure 3.6. Percentage of payer partners using a type of metric to calculate performance-based payments in 2017**




Source: Mathematica's analysis of 2017 CPC+ Payer Survey data.

Note: Figure includes payers that provided performance-based payments in 2017 (N = 57). Categories are not mutually exclusive.

**Increased movement toward performance-based payments.** Several payers indicated that they are increasing their emphasis on performance-based payments and decreasing the amount of funding available to practices just for participating in a primary care transformation initiative. These payers, some of which had extensive experience implementing programs to support primary care transformation, questioned how effective payments for participation were at encouraging practice change given that they do not hold practices directly accountable for performance on cost, utilization, and/or quality measures. In 2017, several payers reported using approaches that blended payments for ***participation*** with payments for ***performance***. Specifically, payers reported making a portion of practices' care management fees contingent on their performance on quality, utilization, or cost metrics; achievement of PCMH-recognition; or willingness to take on downside risk (see text box for examples). A few additional payers described plans to implement similar approaches in future years of CPC+.

**Examples of payers blending payments for participation and payments for performance**

- One payer calculates a practice's per-member per-month (PMPM) payment by applying to the base care management fee for program participation a multiplier that is a composite of the practice's performance on cost, quality, and patient experience measures.
- In one region, all Medicaid managed care organizations (MCOs)—acting under a uniform policy implemented by the state Medicaid authority—paid Patient-Centered Medical Home (PCMH)-recognized practices an additional $1 PMPM.
- One large payer is offering higher care management fees to practices that, in turn, are willing to take on downside risk in value-based contracts. This payer observed, "To just give them a large care management fee when they have nothing at stake…is not something we would entertain. But if they're willing to take risk, then the care management fee could be higher."
- One payer indicated that, starting in 2018, practices will need to demonstrate shared savings for two consecutive years to continue to receive care management fees in 2020 and beyond. Practices that fail to meet this shared savings test will have to complete a corrective action plan designed to improve efficiency to continue receiving care management funding from this payer.

## What payments did practices earn from Medicare FFS for 2017 performance?

CMS released the 2017 performance results of its PBIP calculations in September 2018 and of its shared savings calculations for SSP practices' ACOs in October 2018.[26]

**PBIP results.** The median PBIP retained by Track 1 and Track 2 practices in 2017 was less than half of the maximum PBIP that practices could have earned (Table 3.5). Specifically, the median PBIP that Track 1 practices retained equaled $1.07 PBPM, out of a maximum PBIP payment of $2.50. For Track 2 practices, the median retained equaled $1.83 PBPM out of a possible $4.00 PBPM. (As a comparison, practices received significantly larger payments from CMS in care management fees for participating in CPC+, an average of $15 PBPM for Track 1 and $28 PBPM for Track 2.) Practices retained a higher proportion of the quality component than the utilization component of their PBIP (around 60 percent versus 30 percent, respectively).

Independent practices retained a larger percentage of the utilization component than practices owned by a hospital or health system (31 versus 19 percent for Track 1 and 50 versus 25 percent for Track 2).[27] In contrast, independent and system-owned practices earned a similar proportion of the quality component of the PBIP. This finding may be indicative of the competing incentives that hospital- and system-owned practices face regarding hospital and ED utilization. (The proportion of the PBIP retained did not meaningfully differ by other practice characteristics including size and geography; data not shown.)

[26] Data on the results of other payers' payments based on 2017 performance were not available in time for this report.

[27] When controlling for other practice characteristics that may be associated with practice ownership (including size, prior transformation experience, and meaningful use of health IT) in a multivariate regression framework, we found that ownership by a health system or hospital remained a significant factor in explaining the percentage of the utilization component of the PBIP that practices earned.

**Table 3.5. Median PBPM PBIPs that CPC+ practices earned from Medicare FFS for the 2017 performance year, by track**

| | Track 1 | | | Track 2 | | |
|---|---|---|---|---|---|---|
| | Upfront PBPM payment | Median PBPM payment earned (i.e., retained) | Median percentage of PBIP earned | Upfront PBPM payment | Median PBPM payment earned (i.e., retained) | Median percentage of PBIP earned |
| **Quality and utilization** | **$2.50** | **$1.10** | **44%** | **$4.00** | **$1.89** | **47%** |
| Quality component | $1.25 | $0.77 | 61% | $2.00 | $1.24 | 62% |
| Utilization component | $1.25 | $0.32 | 26% | $2.00 | $0.66 | 33% |

Source: Mathematica's analysis of 2017 payment data provided by CMS.

Note: PBIPs were available only to practices that did not participate in the Medicare Shared Savings Program. Medicare prospectively pays practices in PBIPs. Then, after assessing practice-level performance at the end of the year, practices retain the amount of the PBIP that they earned. CMS asks practices to pay back the proportion of their PBIP payments that they did not earn.

PBPM = per-beneficiary per-month; PBIP = Performance-based Incentive Payment.

**SSP shared savings results.** In 2017, CPC+ practices in SSP belonged to 84 unique SSP ACOs.[28] (These ACOs also include non-CPC+ providers.) It is up to the ACO to decide whether to share any shared savings it earns with its various providers and, if so, how much. For 2017, SSP shared savings performance was mixed:

- Twenty ACOs (24 percent of the 84 SSP ACOs with practices in CPC+)—accounting for 29 percent of CPC+ practices in SSP—received shared savings payments from CMS. The median payment to the ACO was $4,307,931 (or $19.56 PBPM for all beneficiaries in those ACOs, including those served by CPC+ practices and other non-CPC+ providers).
- Fifty-nine ACOs (70 percent of the 84 SSP ACOs)—accounting for 60 percent of CPC+ practices in SSP—neither received payments nor were required to repay loses.
- Five ACOs (6 percent of the SSP ACOs)—accounting for 11 percent of CPC+ practices in SSP—were required to repay losses to CMS. The median repayment amount was $2,349,055 (or $7.54 PBPM for all beneficiaries in those ACOs, including those served by CPC+ practices and other non-CPC+ providers).

[28] We used CPC+ application data and CMS program data to match CPC+ practices to SSP ACOs. We were able to match 99 percent (1,319 out of 1,335) of SSP practices in CPC+ to a SSP ACO.

## How did practices perceive of and use payments for performance?

We fielded the 2018 CPC+ Practice Survey and conducted deep-dive interviews with practices *prior* to CMS releasing results from its PBIP or shared savings calculations for 2017 performance. Therefore, analysis of these data provides insights into how practices perceived and responded to their understanding of how incentive payments would work but do not reflect their perceptions of the results.

When describing their perceptions of how incentive payments would work prior to receiving them, most deep-dive practices expressed pessimism about their ability to earn PBIPs or shared savings payments from CMS; they also did not take concrete steps to try and do so. These sentiments were common among SSP and non-SSP practices. The few deep-dive practices that did report taking concrete steps to maximize their performance rewards focused on improving quality (as opposed to reducing cost or utilization). One such practice that belongs to a large health system described taking the following steps to help retain its PBIP: encouraging patients to complete CAHPS surveys, closing care gaps, and adding centralized quality improvement resources to help practice sites meet performance targets.

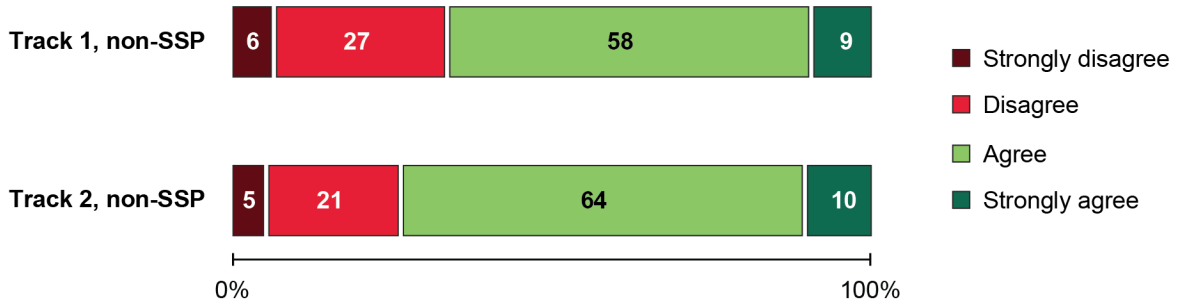
Deep-dive practices that were pessimistic about performance-based payments raised the following concerns:

**Closer look: How do SSP practices view the likelihood of earning shared savings?**

Several deep-dive practices that participate in CPC+ and the Medicare Shared Savings Program (SSP) reported that their Accountable Care Organizations (ACOs) had earned shared savings in past years but did not expect to earn them for 2017. One of those practices believed that the requirement to count CPC+ payments as ACO expenditures was the reason that it did not anticipate receiving shared savings, but other practices pointed out that CPC+ funding accounted for only a small portion of ACO expenditures. Rather, these practices pointed to CMS' formula for calculating cost trends, which requires providers to identify new sources of savings over time to continue earning payouts. Therefore, several deep-dive practices reported that they were considering dropping out of SSP, in part to become eligible to earn Performance-based Incentive Payments (PBIPs) in CPC+, and in part to avoid being exposed to downside risk in future years of SSP.

- **Challenges understanding approaches.** Several deep-dive practices indicated that CPC+ payment approaches were difficult for them to understand**,** which made it hard to set performance goals. Findings from the 2018 CPC+ Practice Survey also indicate that some practices find CPC+ payments difficult to understand. Among non-SSP practices (those eligible for PBIPs), around one-third of Track 1 practices and one-quarter of Track 2 practices indicated that they did not understand how Medicare calculates the proportion of payments that their practices would retain (Figure 3.7).

**Figure 3.7. Percentage of non-SSP practices that agree that "Our practice understands how Medicare calculates the proportion of the PBIP my practice will retain and the portion CMS will recoup"**




Source: Mathematica's analysis of 2018 CPC+ Practice Survey data.
SSP = Medicare Shared Savings Program.

- **Lack of measure alignment.** Several deep-dive practices expressed frustration that measures used to calculate CPC+ payments are not aligned across payers. These practices reported that the lack of alignment made it difficult to know where to focus their improvement efforts. Additionally, a few practices noted that unaligned measure specifications increased documentation burden, because practices had to ask staff to document what each payer required for their measure calculations. As one practice elaborated, "It is really hard for docs to say 'Oh, this insurance company wants this documentation, and this one doesn't.'"

- **Lack of control over specialist and hospital costs.** Both system-owned and independent practices reported that the financial incentives of specialists and hospitals are barriers to CPC+ practice efforts to reduce total patient costs, which affected their efforts to reduce hospital and ED admissions and to limit nonessential referrals to specialists.

- **Lack of data to track performance.** A few deep-dive practices indicated they lacked the information needed (such as timely payer feedback) to track their performance on measures tied to payment and estimate how much of their performance-based payments they would earn.

- **Length of time before results are released.** A few deep-dive practices expressed frustration that there is a significant delay between the end of a performance year and the receipt of performance-based payments. (For example, CMS released the results of its PBIP calculations for 2017 in September 2018.)

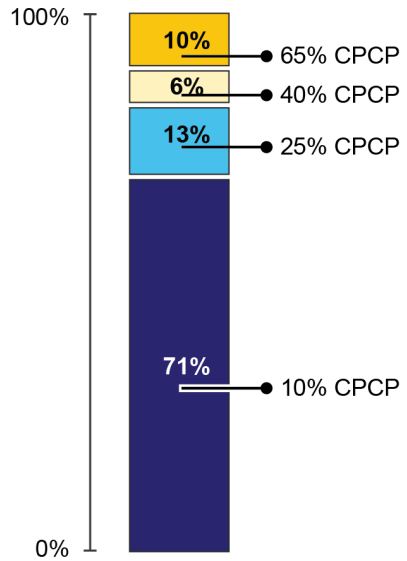
## C. Prospective payments for services

### How did payers structure prospective payments for services?

CMS is paying Track 2 practices a hybrid payment that includes a prospectively paid payment—called the CPCP—with a corresponding reduction in FFS payments for selected evaluation and management (E&M) services. The CPCP is based on a practice's average E&M payments during a historical period. CMS then increases this amount by 10 percent to account for the greater focus on comprehensiveness of medical care and social services expected under Track 2 (called the "comprehensiveness supplement") and further adjusts it to reflect any updates to the Physician Fee Schedule. CMS calculates the CPCP annually and pays practices prospectively on a quarterly basis.

During 2017, Track 2 practices could choose for 10, 25, 40, or 65 percent of their payments for selected E&M visits to be made via the CPCP. In 2017, 71 percent of Track 2 practices selected 10 percent, the lowest CPCP percentage (Figure 3.8). There will be a gradual buildup of the hybrid payment so that, by the last year of CPC+, Track 2 practices must choose to receive either the 40 or 65 percent upfront CPCP percentage, with the corresponding reduction in FFS payments for selected E&M visits (Sessums et al. 2016).

**Figure 3.8. Percentage of Track 2 practices selecting a given CPCP percentage for 2017**




Source: Mathematica's analysis of 2017 payment data provided by CMS.

CPCP = Comprehensive Primary Care Payment.

In their MOUs with CMS, CPC+ payers agreed to implement a prospective payment in lieu of some or all FFS payments for Track 2 practices by January 2018. However, many payers expressed hesitation about moving away from FFS. As of fall 2017, only 22 payers (36 percent) indicated that they expected to do so by January 2018.

- Nine payers (15 percent) already had a prospective payment program in place before CPC+ began in 2017. All of these payers were offering partial or fully capitated primary care payments for both Track 1 and Track 2 practices. These payers reported that they had well-established capitation models, in at least some of their insurance products, before CPC+ and generally did not adjust those models for CPC+.[29]
- Thirteen payers (21 percent) indicated on the CPC+ payer survey that they planned to implement a shift away from FFS for the first time in 2018. However, only three of these payers had developed concrete plans at the time of our interviews held between October and

[29] One payer noted that its use of capitation prior to CPC+ had been limited to Medicaid managed care. In CPC+, capitated contracts with practices have expanded to other lines of business, requiring some changes to data systems and additional contracting and other administrative work.

November 2017. Two of these payers had already implemented capitation arrangements outside of CPC+ over the past few years and expressed confidence in their ability to do so within CPC+ in 2018. The other had progressed quite far in its preparations to launch a new hybrid payment approach that mirrors CMS' approach (that is, a hybrid of prospective payments for some services and a corresponding reduction in FFS payments).

- The remaining 39 payers (64 percent) did not think they would meet the goal by January 2018.

Payers not implementing a prospective payment for services in 2017 described two major barriers to doing so:

- **Lack of practice readiness.** Nearly all of these payers indicated that CPC+ practices were reluctant and/or not ready to accept alternative to FFS payments. One payer observed, "Many providers are theoretically willing to try capitation, but when they're actually faced with the reality of it, they feel unprepared or unwilling to take it on." Another payer noted, "We want providers to take on more risk, but most providers aren't ready to do that yet." Payers indicated that educating practices about these models and/or renegotiating their contracts to include prospective payments can be very time consuming. Several payers also pointed out that the financial margins earned by most primary care practices—particularly independent practices—tend to be insufficient to allow the practices to assume downside risk. A few Medicaid MCOs noted that Medicaid payment rates are already low, and any alternative payment approach that could further reduce payment in the long run would unsettle providers and perhaps cause unintended consequences (such as reducing provider participation in Medicaid).

- **Cost to adjust data systems.** Most payers also conceded that their own claims systems posed a major logistical barrier. Specifically, most payers' data systems are set up to process only claims payments, and the payer would need to invest significant IT and staff resources to retool the systems to handle prospective, capitated payments. Many payers noted that investing those resources in a new alternative-to-FFS approach does not yet have widespread buy-in from corporate leadership. Moreover, some payers also observed that implementing this new payment approach for CPC+ practices only would require their organizations to invest disproportionate resources (primarily in staff time) relative to the limited number of attributed lives that would be affected.

In addition, one commercial payer planning to implement a prospective payment approach in 2017 also raised the following challenges specific to providing prospective payments for self-insured clients: some self-insured clients are skeptical or unsure about the return on investment of these payment approaches, and some states set regulatory restrictions on the inclusion of self-insured lives in those types of arrangements.

## How did practices use prospective payments for services?

Track 2 practices received prospective payments for services to support the provision of comprehensive primary care by members of the care team that cannot normally bill for services (such as care coordinators) and to allow them the flexibility to deliver care outside of traditional billable visits. As part of their 2017 CPC+ care delivery requirements, CMS required Track 2 practices to regularly offer at least one alternative to traditional office visits to increase access to care teams and practitioners in a way that best meets the needs of their population. These services could include e-visits, phone visits, group visits, home visits, alternate location visits (such as, senior centers and assisted living centers), and/or expanded hours in early mornings, evenings, and weekends.

To ensure that we collected enough information to adequately describe practices' experiences moving away from visit-based Medicare FFS payments, we oversampled practices that selected higher CPCP levels (25, 40, or 65 percent) for the deep-dive payment module. Specifically, in 2017, we collected qualitative information on payment from 11 Track 1 practices, 11 Track 2 practices with a 10 percent CPCP, and 7 Track 2 practices with a higher CPCP.

Most of the seven deep-dive practices that elected higher CPCP levels appeared to be more advanced in implementing alternative visits than those that selected a 10 percent CPCP. These practices said they had chosen these higher levels because their organizations had experience with capitation or other provider risk-sharing arrangements. Several reported making multiple types of alternative visits available to patients in 2017.[30] For example, one practice had already offered group visits, patient/caregiver education visits, and video consults with specialists prior to CPC+; expanded those services in 2017; and was about to roll out televisits with primary care practitioners. Similarly, another practice that offered home visits prior to CPC+ expanded them in 2017 and began launching group visits.

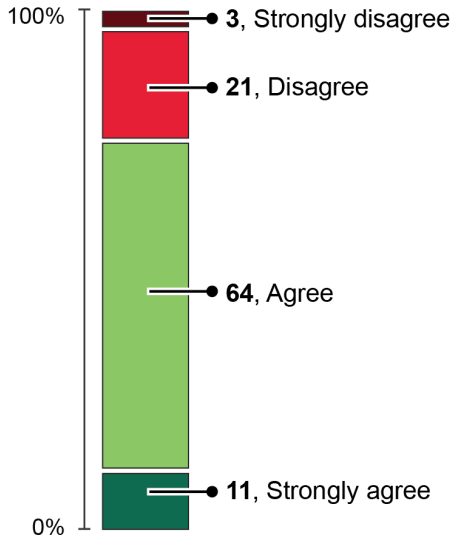
In contrast, most of the 11 deep-dive practices that chose the minimum CPCP percentage of 10 percent did not make much progress launching non-visit-based services in 2017. Most of these practices said their organizations chose the lowest CPCP level, because they were wary of taking on financial risk and lacked experience providing alternatives to traditional billable visits. By the end of 2017, only 3 of these 11 practices had an alternative visit approach in place (and one of these three practices already had implemented its approach prior to CPC+). Several other deep-dive practices said they were currently exploring different types of alternative visits (for example, piloting group visits or telemedicine).

Deep-dive practices electing a 10 percent CPCP reported several barriers to moving forward with offering alternative visits. Several practices indicated that they did not yet have buy-in from practitioners for a transition away from FFS and would have to gain such buy-in before they

[30] Most of the alternative visits described by practices are not reimbursable under traditional Medicare FFS. However, some services (such as group visits, education visits, and telemedicine consults with specialists) are reimbursable under some payer contracts.

could take concrete steps toward introducing an alternative visit approach. Additionally, several deep-dive practices did not fully understand how CMS calculated the CPCP payments and/or needed additional guidance about how the CPCP funds could be spent. Findings from the 2018 CPC+ Practice Survey indicate that around one-quarter of all Track 2 practices reported that they did not understand how Medicare calculates its CPCP payments and, thus, may be facing similar challenges as these deep-dive practices (Figure 3.9). As CPCP percentages increase over time, it will be important to track how these practices fare under an evolving payment environment where their FFS payments decrease and they have additional incentives to provide care through alternative visits.

**Figure 3.9. Percentage of Track 2 practices that agree that "Our practice understands how Medicare calculated its CPCPs"**




Source: Mathematica's analysis of 2018 CPC+ Practice Survey data.

## 3.4. Data feedback to CPC+ practices

In addition to payments, CMS and most participating payers provided CPC+ practices with data feedback to support continuous quality improvement driven by data. Specifically, CMS and its payer partners committed to providing practices with data about utilization of services and/or total cost of care at least quarterly. Most non-Medicare FFS payers also provided practices with quality data. CMS provided the same data feedback to Track 1 and Track 2 practices and required practices to use utilization data to inform strategies to improve population health management. To streamline data review and make it more actionable for practices, CMS and the other payers committed to developing a common approach to quality measurement and data feedback. Below, we first provide an overview of which payers provided data feedback and how that feedback was structured in 2017. We then highlight how practices use data feedback. Finally, we describe the limitations of data feedback and the strategies payers are using to improve it.

### 3.4.1. Which payers are providing data feedback to CPC+ practices?

CMS and 90 percent of participating payers met their commitment to sharing data with CPC+ practices in 2017. The six payers that did not meet this commitment in 2017 either planned to start sharing data feedback with practices in 2018 or were on the verge of dropping out of CPC+ at the time of our data collection.

### 3.4.2. How did CPC+ payers structure data feedback for practices?

**Types of data feedback.** In 2017, CMS and its payer partners provided practices with one or more of the following types of data feedback:

- **Individual, *unaligned* data feedback.** An individual payer organization designed the content and structure of this feedback. CMS and 70 percent of other payers that provided data feedback made payer-specific reports available to CPC+ practices in 2017. (See Appendix 3.C for a blinded sample Medicare FFS feedback report.)

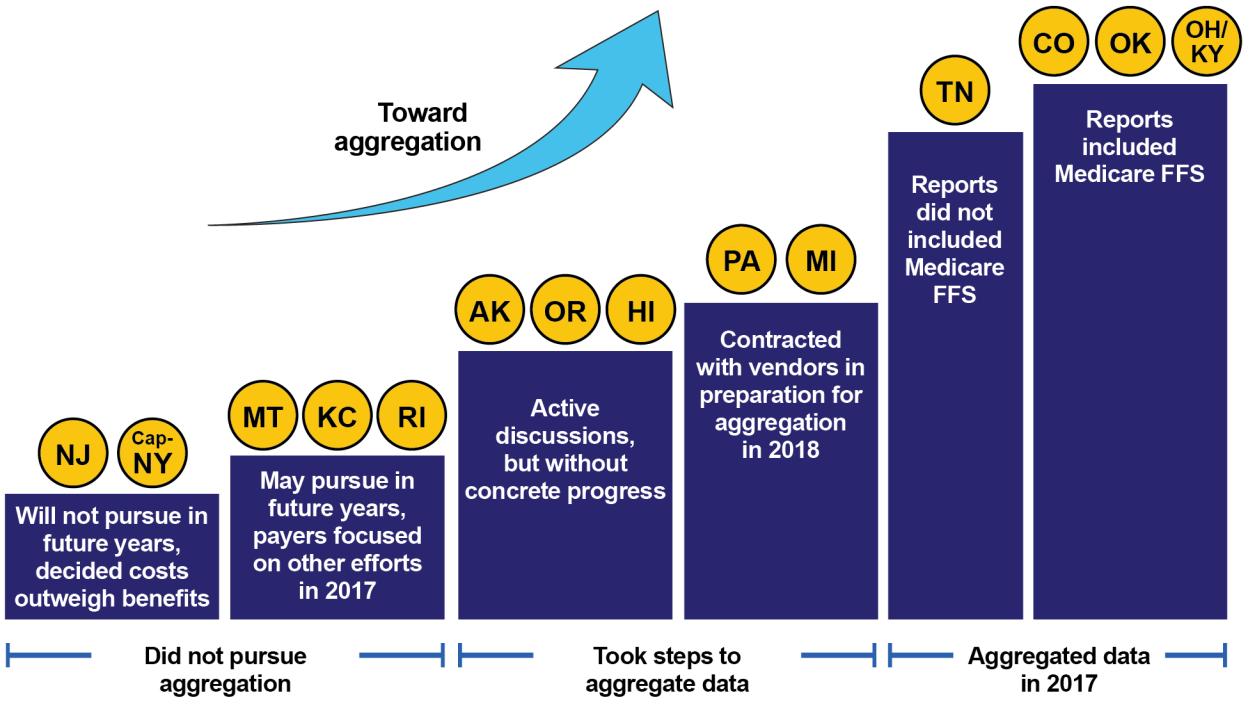
- **Individual, *aligned* data feedback.** Each payer distributes this feedback individually, but the measures included in the feedback, measure specifications, and feedback structure are aligned with other payers. All four payers in Tennessee and the three payers in Arkansas that participated in CPC Classic provided aligned feedback in 2017. (CPC Classic payers in Arkansas are working with the two new payers that joined CPC+ to integrate them into the alignment effort). The Arkansas and Tennessee payers providing aligned feedback account for around 10 percent of all non-Medicare FFS payers participating in CPC+.

- **Aggregated data feedback.** To aggregate data across payers in a given region, participating payers submit their claims data to a third-party vendor that produces a single report or tool analyzing and presenting that data. CMS encouraged payers to aggregate claims data feedback in each region to improve practices' view of their entire patient population and reduce the burden on practices to access, review, and reconcile multiple reports or tools. CMS planned to join data aggregation efforts in regions where non-Medicare FFS payers already agreed upon an approach and vendor and in which Medicare data would markedly simplify data review for practices. They considered this approach to be the most efficient way to leverage existing regional infrastructure. Regions' progress toward data aggregation (Figure 3.10) could be grouped into the following general categories:

    - **Did not pursue aggregation** in 2017 either because payers determined the costs of doing so outweighed the benefits (New York and New Jersey) or because regions were focused on other efforts, such as a regional Health Information Exchange (HIE; Montana, Kansas City, and Rhode Island).
    - **Took steps toward aggregating data** in 2017, such as discussing measure alignment or selecting a data aggregation vendor (Arkansas, Oregon,[31] Hawaii, Michigan, and Philadelphia).
    - **Provided aggregated data feedback to practices** in 2017 (Colorado, Tennessee, Ohio/Northern Kentucky, and Oklahoma). Medicare FFS joined regional aggregation efforts in the three of these regions that had aggregated data in CPC Classic—Colorado, Ohio/Northern Kentucky, and Oklahoma. All non-Medicare FFS payers in Tennessee—all of which participate in CPC+ for their Medicaid lines of business only—aggregated data as part of a state Medicaid initiative. Medicare FFS did not join this effort in 2017. (See Appendix 3.D for additional details on data aggregation.)

[31] Several CPC+ payers in Oregon provided aggregated data feedback to practices in 2017. However, other Oregon payers had reservations about joining the existing aggregation effort and were considering other options for CPC+ data aggregation.

**Figure 3.10. Regional progress toward aggregated feedback as of December 2017**




Source: Mathematica's analysis of 2017 CMS and other payer interview data.

Note: Several CPC+ payers in Oregon provided aggregated data feedback to practices in 2017. However, other Oregon payers had reservations about joining the existing aggregation effort and were considering other options for CPC+ data aggregation.

**Structure and content of data feedback.** The structure and content of CMS and other payers' individual and aggregated data feedback varied. Thirty-six of the 54 payers that provided data feedback in 2017 (66 percent) provided additional detail on the structure and content of their data feedback in response to the 2017 CPC+ Payer Survey. We highlight features of their feedback reports below and in Table 3.6.

- **Level of reporting.** Most commonly, CMS and other payers provided data feedback at both the practice and patient levels. Fewer payers provided feedback at the practitioner and/or system level.

**Region-level data feedback**

In addition to providing data feedback to CPC+ practices, CMS also provided a broader set of stakeholders, including CPC+ payers, with access to reports on aggregate performance on Medicare fee-for-service (FFS) beneficiaries at the region level. The regional report was similar to the dashboard used in practice reports but reported demographics, spending, and utilization at the regional level, allowing users to select any region or all regions as a benchmark for comparison. The regional reports did not include patient- or practice-level data or information about use of specialists.

- **Types of data.** CMS and other payers most often based their data feedback on claims data. A few payers also integrated data from other sources, such as EHRs, HIEs, or patient surveys, to provide practices more comprehensive feedback. Most commonly, CMS and other payers are providing data on a combination of utilization, quality-of-care, and cost-of-care measures. Payers typically show trends in these measures over time and provide comparisons with benchmarks (such as other practices in their region). Several payers highlight measures that are tied to performance-based payments in their feedback to make it easier for practices to track their progress toward earning additional payments. For example, CMS highlights at the top of its dashboard the two utilization measures it uses to calculate PBIPs: (1) hospitalizations and (2) ED visits. Other data CMS or other payers reported included expenditure data for a given specialist or hospital, lists of patients with care gaps or high utilization patterns, and patient demographic information.

- **Format of feedback.** In 2017, CMS provided CPC+ practices data feedback via an interactive Excel file. Practices could tailor their view of expenditure and utilization data by demographic characteristics of attributed patients. Around 40 percent of other payers that provided feedback to practices also used an interactive format that allowed practices to tailor their views. Around one-half of payers provided practices static reports, such as a static PDF file.

- **Frequency of feedback.** In 2017, CMS planned to release data feedback for practices quarterly. It released its first round of CPC+ data feedback in May 2017 and two subsequent rounds in August and November 2017. Other payers also typically made feedback available quarterly or monthly. One-quarter of payers provided at least some feedback (such as admission/discharge/transfer [ADT] data) more frequently, either weekly or in real time.

### Table 3.6. Characteristics of CPC+ data feedback in 2017

| | Characteristic of Medicare FFS individual, unaligned feedback? | Characteristic of aggregated feedback in | | | Percentage of payers reporting data feedback feature applies to their data feedback (individual and/or aggregated) (N = 36)[a] |
|---|---|---|---|---|---|
| | | CO? | OK? | OH/KY? | |
| **Level of reporting** | | | | | |
| Health system | | ✓ | ✓ | ✓ | 60 |
| Practice | ✓ | ✓ | ✓ | ✓ | 83 |
| Practitioner | ✓ | ✓ | ✓ | ✓ | 61 |
| Patient | ✓ | ✓ | ✓ | ✓ | 72 |
| **Type of data** | | | | | |
| Utilization | ✓ | ✓ | ✓ | ✓ | 92 |
| Cost | ✓ | ✓ | | ✓ | 78 |
| Quality | | ✓ | | ✓ | 89 |
| Specialists or hospital cost transparency data | ✓ | ✓ | | | 44 |
| **Format for sharing data** | | | | | |
| Interactive[b] | ✓ | ✓ | ✓ | ✓ | 39 |
| Static | | | | | 53 |
| Other | | | | | 8 |

**Table 3.6.** ***(continued)***

| | Characteristic of Medicare FFS individual, unaligned feedback? | Characteristic of aggregated feedback in | | | Percentage of payers reporting data feedback feature applies to their data feedback (individual and/or aggregated) (N = 36)[a] |
|---|---|---|---|---|---|
| | | CO? | OK? | OH/KY? | |
| **Data feedback frequency[c]** | | | | | |
| Quarterly | ✓ | ✓ | ✓ | ✓ | 42 |
| Monthly | | | | | 25 |
| Weekly | | | | | 14 |
| Real time | | | | | 11 |
| Other | | | | | 8 |

Sources: Mathematica's analysis of the 2017 CPC+ Payer Survey data, Medicare FFS data feedback, and interviews with data aggregators.

Note: Rows are not mutually exclusive.

[a] Thirty-six of the 54 payers that provided data feedback in 2017 (66 percent) provided additional detail on the structure and content of those reports. This table reflects only those payers' feedback and should therefore be interpreted with some caution.

[b] Interactive data feedback formats allow practices to tailor their views. Interactive formats include Excel files with pivot tables or pre-programmed filters as well as more advanced data portals.

[c] Payers may provide some type of feedback (such as admission/discharge/transfer data) more frequently than others (such as claims-based measures). For this table, we characterized payers based upon their most frequently shared data.

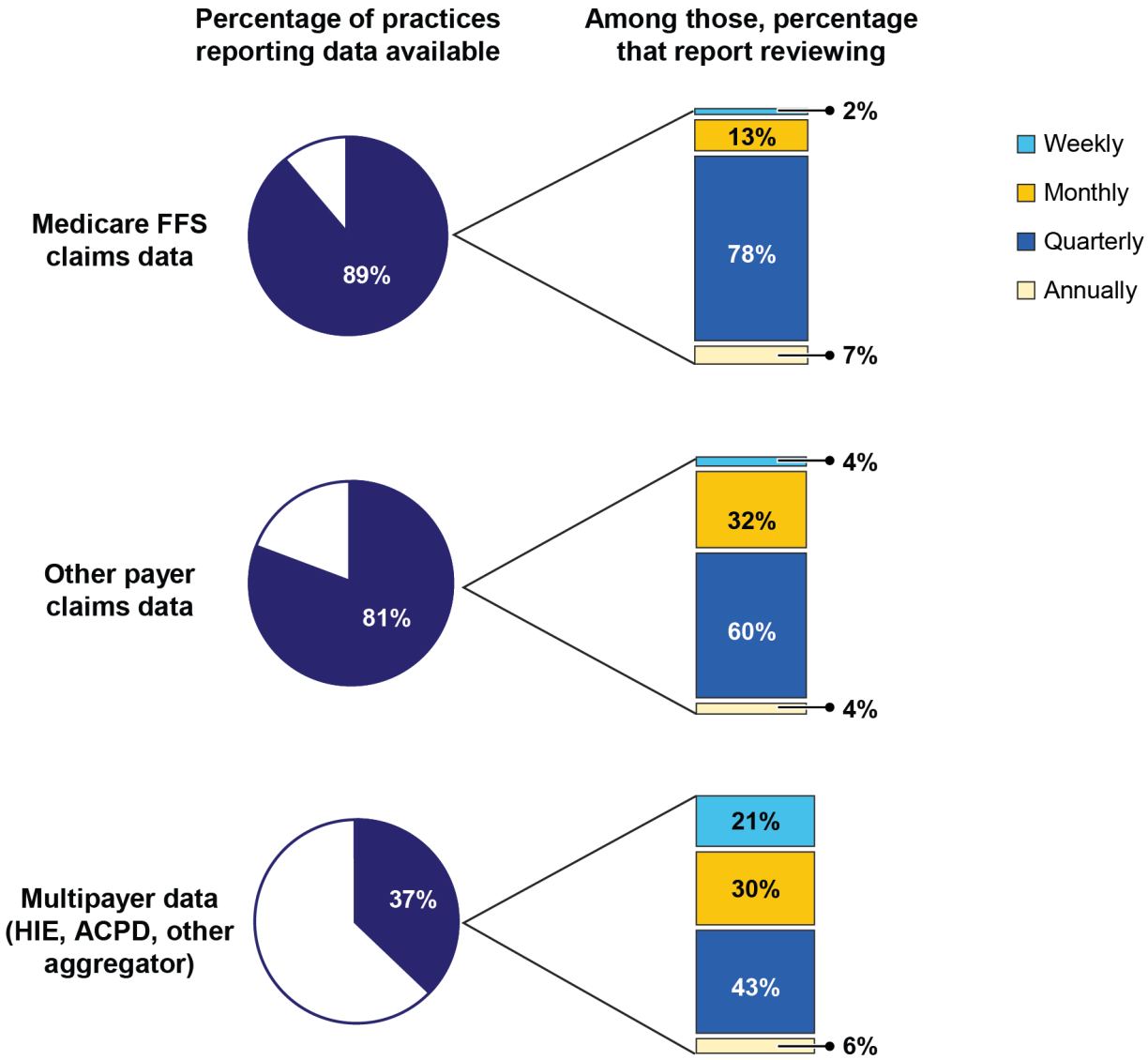
FFS = fee-for-service.

### 3.4.3. How often do practices review data feedback? How do they use it?

Most practices knew data feedback from CMS and other payers was available and downloaded and reviewed it. CMS asked practices to report on data availability and its use as part of their quarterly reporting on care delivery requirement progress. For the last quarter of 2017, 89 percent of practices knew Medicare FFS feedback was available (Figure 3.11). A high but slightly smaller proportion of practices (81 percent) reported that data feedback from other payers was available; these practices may include a mix of practices without access to it and those unaware of their access. Practices reported that data feedback pulling together data from multiple sources (through an HIE, all claims payer database, or claims data aggregator) was available to a smaller 37 percent of practices.

Across data types and CPC+ tracks, practices most commonly reported that they reviewed data quarterly, followed by monthly. This timing aligns with the frequency with which most payers reported providing data feedback. Practices that received multipayer data were more likely to report reviewing that data weekly than they were to report frequent review of Medicare FFS or other payer claims data, perhaps because HIE data, unlike payer claims data, is updated in real time. (Practices also reported on data available from other sources such as their own EHR or hospitals. Chapter 4 provides more information on how practices used these data.)

**Figure 3.11. Percentage of practices that reported payers made data feedback available and, if available, the frequency of practices' review**



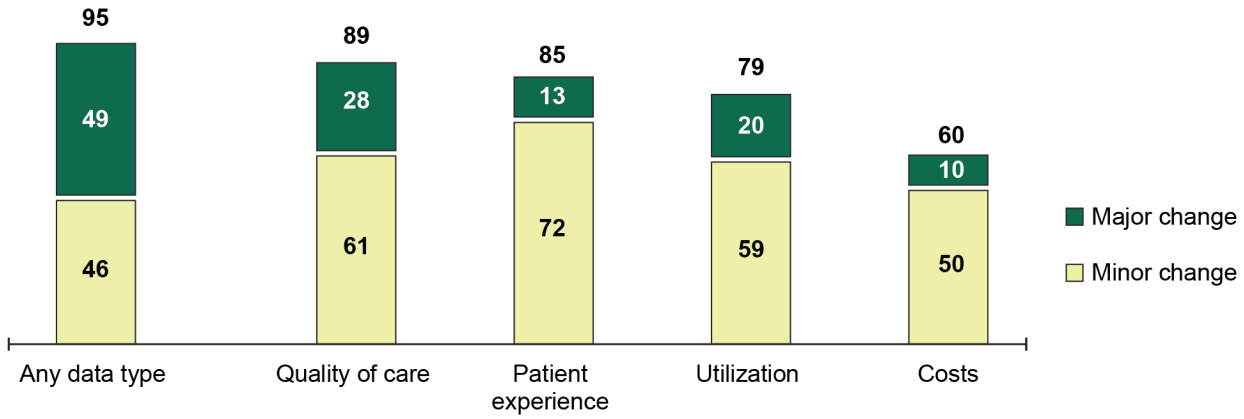

Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Medicare fee-for-service (FFS) data feedback was available to all practices; the 11 percent of practices reporting otherwise were unaware of its availability. Multipayer data included Health Information Exchange (HIE) and all claims payer database (ACPD) data as well as data aggregated by other organizations. CMS did not specify whether "other payer claims data" included only individual payer reports or should also include multipayer reports. Thus, some practices may have reflected on aggregated claims data in response to that care delivery reporting question, as well.

**Practice use of data feedback to make changes to care delivery.** Most practices that reviewed data feedback used it to inform practice change. In response to the 2018 CPC+ Practice Survey, one-half of CPC+ practices reported making at least one major change to how they deliver care in response to data feedback (Figure 3.12). Most other practices (46 percent) reporting making at least a minor change. Practices were most likely to report making major

changes based on quality-of-care data (28 percent of practices), followed by service utilization data (20 percent of practices). The proportion of practices making changes as a result of data feedback did not differ meaningfully by CPC+ track, practices' participation in SSP, or ownership status (independent versus owned by a health system or hospital).

**Figure 3.12. Percentage of practices that reported making changes to how they deliver care in response to data feedback, overall and by data type**




Source: Mathematica's analysis of 2018 CPC+ Practice Survey data.

Interviews with deep-dive practices provided insight into the types of changes practices made in response to data feedback. Many deep-dive practices used practice- or system-level data feedback from CMS and other payers to prioritize areas for quality improvement work. For example, one practice reviewed its practice-level data and recognized that some patients went to the emergency department because they could not schedule a timely appointment with their primary care physician; the practice then expanded its hours by hiring mid-level practitioners to see patients in the early mornings and evenings. Additionally, a few practices reported using data on the cost associated with a given specialist to identify high-volume or high-cost specialists with which they could develop collaborative care agreements. (See text box for additional detail on payers' patient-level data feedback and how practices used it.)

**System-owned and independent practices tended to use different strategies to identify areas to work on.** Several deep-dive practices owned by a system designated system-level staff to review payer feedback reports for all practices in the system and, in many cases, simplify the data so practices could more readily interpret the main themes and identify areas for improvement. System-level staff put the main takeaways into a separate document or created simplified tables and graphs to help busy practitioners and staff review the data. A few system-level respondents indicated that this process would have been easier if CMS provided data feedback at the system level. Independent practices tended to use different strategies to share payer feedback with practitioners and staff, including posting it in common areas, making it available on a shared computer drive, distributing it through email, or sharing it verbally during practice meetings.

### Closer look: Patient-level data feedback

- **Who provided it in 2017?** CMS and 72 percent of other payers.
- **What information did payers provide?**

  CMS provided patient-level data on:

  - Spending overall and by type of service, such as post-acute care or outpatient services
  - Service use, including emergency department (ED) visits and hospitalizations

  Examples of patient-level data provided by non-Medicare fee-for-service (FFS) payers:

  - Risk scores for each patient attributed by the payer
  - Lists of patients with gaps in care or with utilization patterns that suggest poorly coordinated care
  - Detailed claims information about services from other providers and suppliers, such as the date and provider of service, diagnosis codes, prescriptions filled, lab tests performed
- **How frequently is data available?** CMS and other payers typically drew on claims data to provide patient-level feedback to practices either monthly or quarterly. Given claims run-out and processing times, these data were typically three to six months old when they were provided to practices. A few payers reported providing information more frequently, either in real time (four payers) or weekly (five payers). Real-time data included daily admission/discharge/transfer (ADT) data. One payer providing ADT data to practices allowed practitioners to refer patients to the payer for care management services through its data feedback tool. Payers providing ADT data tended to be larger (10,000 or more lives attributed to CPC+) and operate in one versus multiple CPC+ regions.
- **How do practices use the data?** Almost all practices (97 percent) reported to CMS as part of their care delivery requirement reporting that they use data to identify patients with care gaps or that should be categorized as high risk. Although deep-dive practices more commonly provided examples of using their own electronic health record (EHR) data for these purposes, several did describe using payer feedback to do so. For example:

  - One practice manager reported that several of its commercial health plans provide it with monthly lists of patients that are due for preventive care (such as a pap test). The practice manager checks the website monthly and reaches out to patients as needed regarding outstanding care.
  - One CPC+ coordinator indicated that the practice reviews patient-level utilization reports and groups patients into three utilization categories: (1) frequent ED users who have mental or chronic health conditions; (2) users who go to the ED once or twice per year, and (3) occasional new users who have been to the ED but do not consistently use it. The nurses and doctors review this list and provide educational materials.
  - One system-level CPC+ coordinator uses the feedback reports from CMS and other payers to identify its “top spenders” and determine whether they have enrolled in care management (and if not, why not).

### 3.4.4. How are payers improving data feedback?

CPC+ payers recognized the value of data feedback in guiding practice transformation, and most practices used data feedback to guide changes to how they deliver care. Still, payers and practices both acknowledged that payer data feedback has limitations and could be improved. Below, we summarize challenges related to data feedback—both individual and aggregated data—raised by payers and practices, and we highlight steps payers took in 2017 to address those challenges. (See text box for challenges related to aggregating data feedback.)

**"Data is huge. I think that data is the key element for driving any sort of meaningful conversations with providers around change. But, you have to have credible, consistent data to share. And it has to be something that's actionable for [practices]."**

***—CPC+ payer, 2017***

- **Claims data are often not timely.** Given the delay between date of service and a provider's submission of the claims, payers often allow for a "run-out" period before considering claims data sufficiently complete to warrant reporting. Further, payers may require additional time to analyze, validate, and format the data before releasing it. These factors contribute to the feedback data often being three to six months old when reported to practices. Given this lag, some payers and practices noted that claims data is better at reflecting trends and areas for improvement than for informing care needs at the point of service. In 2017, several payers worked to decrease claims processing times. For example, payers in one region aggregating data switched their data aggregation vendor to one that could analyze and format data more quickly.

- **Claims data alone are insufficient for measuring quality of care and managing population health.**
  - Several payers are working to improve the usefulness of data feedback by integrating data from practices' EHRs. However, the process of combining clinical and claims data sources is labor intensive. Many of these payers described extensive efforts to improve the quality of EHR data used to derive electronic clinical quality measures. These payers are working with multiple health IT vendors to improve the flow of data from practices' EHRs to the payer or sending payer staff to practices to help with EHR documentation and to discuss discrepancies between practice and payer data.
  - A few payers are working to integrate real-time ADT data, which they believed practices particularly valued. (See text box above on patient-level data feedback.)
  - A few payers were working to integrate HIE data. For example, some payers in Colorado were collaborating with a local university and a regional HIE on a pilot program to use clinical data in combination with aggregated claims data to guide practices in prioritizing which patients with diabetes, depression, and/or cancer screening need to receive immediate outreach.

- **Practices found the structure and format of tools to be confusing.** To improve their usability, CMS and several other payers solicited practice input on their feedback tools. At least one payer had physicians help design its tool.

- **Some practices needed additional assistance to understand and use data feedback.** Many payers noted variability among practices in their sophistication in using data, remarking that while some wanted more data, a significant subset of practices found the information overwhelming and were unable to integrate review and interpretation of the data into their workflow. A few deep-dive practices provided insight into this challenge, indicating that they were overwhelmed by the amount of data the feedback contained and other more pressing CPC+ requirements so had not reviewed payer feedback in detail. These practices tended to be small, with one to two primary care practitioners. To help practices use their tools, CMS and a few other payers provide tailored coaching to help practices use data feedback. For example, in Colorado, the data aggregator disseminated training videos and user manuals to practices and trained the RLN practice facilitators on their tool so that, in turn, practice facilitators could educate practices on how to use the data to improve care. Additionally, the data aggregator and RLN dedicated presentation time during CPC+ regional learning meetings to going over the tool and held breakout sessions at which practices could receive individualized support.

**Closer look: Challenges to aggregating data feedback**

Payers frequently reported the following challenges specific to aggregating data feedback:

- High cost of designing aggregated feedback and technically aggregating the data.
- Decision of some payers to not join data aggregation efforts limits the utility of aggregated data.
- Issues agreeing on specific measures to report given differences in payers' patient populations and, for multi-region payers, the preference to have the same measure sets across regions.
- Concerns that reporting cost data would allow competitors to deduce their payment rates to practices or other providers.
- Challenges accurately combining data across payers given differences in claims data processes and reporting structures.
- Lack of use of aggregated data by some practices
- Continued dissemination of parallel, individual payer reports.

For more information on these challenges, see Appendix 3.D.

## 3.5. Learning activities for CPC+ practices

In addition to enhanced payments and data feedback that CMS and other payers provided to practices, CMS funded learning activities for CPC+ practices. These activities aim to (1) provide practices with detailed information and resources on the Comprehensive Primary Care Functions and care delivery requirements and (2) promote peer learning among CPC+ practices. CPC+ payer partners did not commit to providing CPC+ practices with learning support in their MOU with CMS. Nevertheless, 84 percent of other payers reported providing practices with technical assistance or practice coaching.

In this section, we first provide an overview of the learning activities CMS and other payers provided to CPC+ practices and how practices perceived those supports. We then provide additional details on each of the three types of support provided by CMS and its contractors: (1) information dissemination tools, (2) group learning activities, and (3) tailored one-on-one or small group support to individual practices.

### 3.5.1. Overview of CPC+ learning activities for CPC+ practices

#### Who provided learning activities for CPC+ practices?

CMS and 84 percent of other payer partners reported that they provided technical assistance or learning support to CPC+ practices in 2017. CMS contracted with several organizations to support CPC+ practices. The implementation contractor—which supports CMS' work on a range of areas including onboarding practices and calculating CPC+ payments—maintains a help desk for practices. The National Learning Team contractor is leading CPC+-wide learning activities, such as national webinars, and disseminating information about CPC+ to all participants. The RLN provides region-level learning supports, including regional learning sessions and tailored one-on-one support to individual practices ("practice coaching"). The RLN has as many as five staff members located in each CPC+ region that work directly with CPC+ practices. In 2017, these "practice facilitators" worked with an average of 80 CPC+ practices.[32]

During interviews, the RLN and National Learning Team noted some initial challenges delineating their respective roles and providing practices with a cohesive learning structure. They described overcoming these challenges through open communication and a mutual recognition that is it critical for practices to view all learning supports as components of one overarching curriculum. The RLN and National Learning Team staff standardized language about learning supports, coordinated the timing and content of learning activities, and helped practices prioritize which learning activities were most relevant for their practice.

#### What learning support did CMS and other payers provide?

CMS and its National Learning Team and RLN learning contractors offered three types of learning support in 2017:

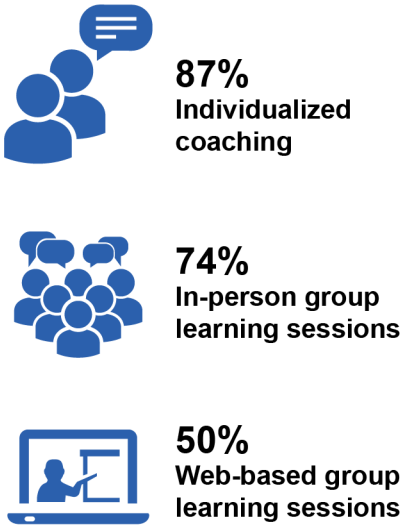
1. Information dissemination tools, including a web-based collaboration platform, an implementation guide, and a weekly newsletter.
2. Group learning activities, including:
   a. National webinars to disseminate detailed information to CPC+ practices,
   b. Cross-regional learning groups to promote peer learning among practices working on similar CPC+-related changes or facing similar health IT challenges, and
   c. Regional virtual and in-person learning sessions.

[32] The RLN prime contractor established subcontracts with 10 learning organizations to provide region-specific learning supports in each CPC+ region in which practices started implementation in 2017. Four subcontractors provide learning supports in multiple regions, and two subcontractors provide learning supports in the Colorado region.

3. Tailored one-on-one and small group support, including:
   a. A centralized help desk that CPC+ practices could contact with questions, and
   b. Practice coaching over the phone or in person for practices identified as needing additional assistance.

We describe these learning activities in more detail in the next section. They were generally structured the same for Track 1 and Track 2 practices. However, the National Learning Team and RLN did present content tailored to the focus areas of each track in information dissemination tools, webinars, and breakout sessions.

**Figure 3.13. Among the 84 percent of payer partners offering technical assistance to CPC+ practices, the type of support offered**




Source: Mathematica's analysis of 2017 CPC+ Payer Survey data.

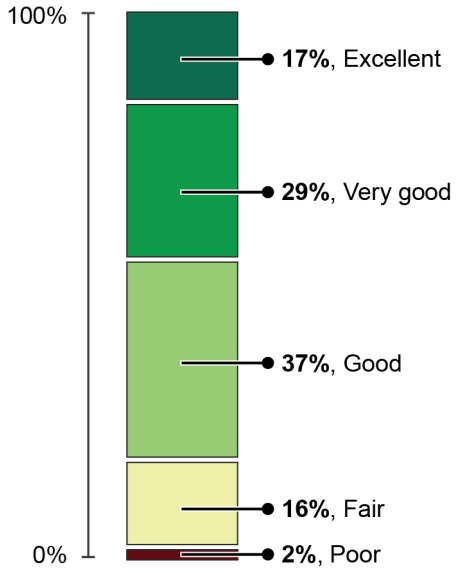
Among the 84 percent of other payers providing learning support to CPC+ practices, the most prevalent mode of technical assistance was individualized practice coaching (87 percent), followed by in-person group learning sessions (74 percent; Figure 3.13). Half of the payer partners providing technical assistance to practices provided web-based group learning sessions. On the 2018 CPC+ Practice Survey, around half of CPC+ practices that contracted with non-Medicare FFS payers reported that they had in the prior six months received training from non-Medicare FFS payers on how to use data feedback and/or coaching on how to improve practice processes and workflows.

Just over half of the payer partners who were offering technical assistance or practice coaching to CPC+ practices reported that they coordinated their efforts with the RLN in 2017. For example, in Oklahoma, the RLN and other payers coordinated learning efforts though a "field service team," a collaboration that began in CPC Classic and continues in CPC+. For the field service team, each payer partner in Oklahoma provided dedicated staff to deliver individualized technical assistance to and support group learning sessions for CPC+ practices in collaboration with the RLN. Payer partners and practice facilitators in Oklahoma and other regions generally acknowledged that increasing coordination could prevent overburdening practices with duplicative support and save payers' resources.

## How did practices perceive CPC+ learning supports?

CPC+ practices highly rated learning activities. On the 2018 CPC+ Practice Survey, 82 percent of practices indicated that they are satisfied with the CPC+ learning community, with 17 percent of practices rating CPC+ learning activities as excellent at meeting their CPC+ related needs and helping them improve primary care (Figure 3.14). Ratings of learning activities were similar across CPC+ tracks, practices' SSP status, and ownership (independent versus hospital- or system-owned).

**Figure 3.14. Percentage of CPC+ practices reporting that CPC+ learning activities were excellent, very good, good, fair, or poor at meeting their CPC+ related needs and helping improve primary care**




Source: Mathematica's analysis of 2018 CPC+ Practice Survey data.

### 3.5.2. Detail on learning activities for CPC+ practices

#### A. Information dissemination tools

The National Learning Team used the following tools to disseminate comprehensive information on CPC+ to practices and to encourage information sharing among participants:

- **CPC+ Connect, a web-based communication platform**. In response to the 2018 CPC+ Practice Survey, most practices (94 percent) reported using CPC+ Connect. Deep-dive practices reported using it to access resources (such as tips on how to recruit participants for and run PFACs), submit questions to CMS, the National Learning Team, or the RLN, and share information with other practices. For example, one practice reported that a similar practice shared useful information on CPC+ Connect about care management roles and workflows, while another practice reported learning about billing for nutrition services from another practice via CPC+ Connect. Practice facilitators reported that practices initially used CPC+ Connect to ask the practice facilitators questions, but over time, practices started looking to each other to ask questions and share information.

- **CPC+ implementation guide**. This reference document described each of the functions and care delivery requirements in detail, differentiated requirements for Track 1 versus Track 2 practices, and included links to evidence-based tools, templates, and articles to give practices examples they could model or adapt. Practice facilitators and deep-dive practices found the following parts of the implementation guide particularly useful: (1) the CPC+ 2017 Roadmap, which specified key change milestones by quarter, giving practices a sense of the progress they should be making to meet the requirements by the end of the year, and (2) detailed examples that clearly illustrated changes that practices could make to meet requirements.

- **On the Plus Side weekly electronic newsletter.** Many deep-dive practices reported scanning the weekly newsletters for new information and found them helpful reminders of dates and deadlines.

Although practices and RLN staff found information dissemination tools useful, most deep-dive practices also reported that the amount of information disseminated through CPC+ Connect and the length of the implementation guide could be overwhelming. Deep-dive practices also commonly reported that the 2017 implementation guide was written in vague and "bureaucratic" language that was difficult to interpret. To make the information more manageable, RLN practice facilitators referred practices to specific pages in the guide or resources on CPC+ Connect relevant to work the practice was undertaking. One practice facilitator developed brief "fact sheets" that synthesized topics covered in the implementation guide. She distributed them to practices in her region during practice coaching sessions and shared them with other practices and practice facilitators on CPC+ Connect.

**"[The implementation guide] is in Medicare language, so you'll have to [read it] two or three times to figure out what it is that they want you to do or take away."**

***—CPC+ office manager at a small, independently owned Track 2 practice***

## B. Group learning activities

The National Learning Team and RLN offered CPC+ practices a range of group learning activities in 2017 (Table 3.7). CPC+ practices were not required to participate in group learning activities, and practices had flexibility to decide which staff attended them. For many deep-dive practices owned by a health system or hospital, system-level staff were more involved in CPC+ learning activities than practice-level staff (see text box for additional information). Both independent and system- or hospital-owned deep-dive practices reported that care managers and practice managers were more likely to participate in these activities than practitioners or other staff at the practice level.

### Table 3.7. Description of group learning activities offered by the National Learning Team and Regional Learning Network in 2017

| Provided by the National Learning Team | |
|---|---|
| **National webinars** | Webinars intended to provide timely information on CPC+ to all CPC+ practices. The National Learning Team organized the national webinars into two series in 2017: (1) one that presented logistical information about CPC+ participation and (2) one that provided an overview of the CPC+ supports and CPC+ Comprehensive Primary Care Functions. |
| **CPC+ Action Groups** | Series of two to three webinars held over six weeks that aimed to promote peer learning by bringing together practices across CPC+ regions working on a similar CPC+-related change, such as improving longitudinal care management or addressing social needs in primary care. Between each webinar, practices were expected to work on small tests of change and then discuss their experiences with other practices during the following session. |
| **Practices in Action** | Stand-alone virtual webinars that are scheduled for a half-hour, once a week. These webinars cover more specific topics than the Action Groups, such as timely exchange of hospital and emergency room data or using an algorithm and clinical intuition to identify patients needing additional care (i.e., a two-step risk-stratification process). |

**Table 3.7.** ***(continued)***

| | |
|---|---|
| **Provided by the National Learning Team (continued)** | |
| **Health IT Affinity Groups** | Live webinars that bring together practices with either their health IT vendor and/or other practices to discuss solutions to using health IT to support CPC+ implementation. (See Section 3.6 on health IT vendor support for additional information on health IT Affinity Groups.) |
| **Office hours** | Virtual sessions that give practices an opportunity to ask questions and directly engage with CMS staff and its contractors. |
| **Provided by the Regional Learning Network** | |
| **Local launch sessions** | Live webinars that introduced practices to practice facilitators and practice change concepts. As part of these sessions, practices were asked to complete a strengths, weaknesses, opportunities, and threats (SWOT) analysis and introduced to the concept of plan-do-study-act (PDSA) cycles. |
| **Regional learning sessions** | Half-day, virtual and full-day, in-person meetings organized by the regional learning staff in each of the 14 CPC+ regions. In 2017, practice facilitators led four learning sessions in each region (two in-person learning sessions and two virtual). These meetings included a plenary session that was similar across all regions, and then breakout sessions designed by regional learning staff. The Comprehensive Primary Care Functions most commonly covered during regional learning sessions were care management and comprehensiveness and coordination, and the function least commonly covered was access and continuity. |

Sources: Mathematica's analysis of CPC+ program documentation and interviews with learning contractors.

### Closer look: How engaged are system-level staff in CPC+ learning activities?

For many deep-dive practices owned by a system or hospital, system-level staff were more involved in CPC+ learning activities than practice-level staff. These system-level staff attended learning events, reviewed the CPC+ implementation guide and resources on CPC+ Connect, and communicated directly with Regional Learning Network (RLN) practice facilitators. In these cases, system-level staff typically consolidated the information that they learned and then passed it on to individual CPC+ practice sites through system-organized learning sessions and care management meetings or through one-on-one meetings between system-level quality improvement staff and practices.

As an example, in one system, system-level staff reviewed the implementation guide and identified items (such as care delivery requirements or change tactics) on which practices could focus, and then presented individual practice sites with the shorter list to make implementation less overwhelming. Staff identified elements to focus on by eliminating efforts that the practice was already engaged in and prioritizing efforts that a practice could use to satisfy requirements for multiple programs (for example, National Committee on Quality Assurance [NCQA] Patient-Centered Medical Home [PCMH] recognition). Practice managers then took this list back to their practice, selected elements to work on, and informed the system of their selections. System and practice staff then met quarterly to look at progress.

In cases where system-level staff were involved in learning activities, practice facilitators reported that they often had to gain the trust of system-level staff before meeting directly with practice members. Some health systems were cooperative, but others limited practice facilitators' interactions with practices or prevented them from working directly with practices. In a few cases, system-level staff noted that they centralized learning to protect practice staff from feeling like they were being critiqued or that their time was consumed by CPC+ learning activities. Practice facilitators had more interaction with clinic leads and care managers in independent practices and, compared with system-owned practices, found that independent practices were more proactive about reaching out to them.

**Closer look (continued)**

**"There's also a layer of just working with systems and…trying to build that relationship so that they're confident that we're not going to go into their practices and basically tell them they need to do things that directly go against what the system is trying to do. So we have to work together with the system to build the relationship so that we are kind of invited in to the practices, and that takes time. It takes a lot of time to do that, in fact."**

***—Practice facilitator, 2017***

In general, deep-dive practices reported that group learning activities—in particular regional learning sessions—were helpful. Specifically, practices found it helpful when learning sessions included:

- Presentations from other practices on issues that most practices were struggling with, such as behavioral health integration. Deep-dive practices noted that "hands on" activities, such as role-playing a mock care team meeting, were helpful to demonstrate how different advanced care delivery processes could work.
- Breakout sessions for individuals serving in a similar role, such as care managers.
- Opportunities for networking. Practices reported that networking opportunities helped them identify changes other practices were making that they could take back to their own practices.

Many deep-dive practices made changes as a result of learning session content. For example, a referral coordinator reported that a session about behavioral health integration facilitated the implementation of warm handoffs between primary care practitioners and the behavioral health providers at her practice. Additionally, several deep-dive practices found that learning sessions helped to make CPC+ less overwhelming by providing a helpful overview of CPC+, a perspective on the overall implementation process, and clarification on next steps. Practices were reassured to hear about challenges other practices were facing. It helped them realize that they were not alone and that others were struggling with similar problems.

**"I thought [attending the learning session] was important. [The practice staff] came back extremely excited, and feeling they had a sense of pride, because of all the work they have done. I think I articulate the whys pretty well, but when you see it and you're sitting in the room with other people, I think it made them feel good. They came back really hyped."**

***—System-level staff at a medium, system-owned practice***

Although practices generally found group learning sessions helpful, interviews with National Learning Team and RLN staff and deep-dive practices also revealed some challenges:

- **Difficulty with timely preparation for regional learning sessions.** A few deep-dive practices expressed frustration that agendas and slides were not always finalized in advance of learning sessions, noting that if practices were provided these materials earlier, it would

be easier for them to identify which staff should attend a session and arrange their schedules to facilitate this attendance.

- **Busy practice schedules and the national scope of CPC+ made it difficult for practices to attend group learning sessions.** Several deep-dive practices reported that it was difficult to take time away from seeing patients to attend time-intensive group learning sessions, including in-person regional learning sessions and multi-meeting Action Groups. In response, the National Learning Team introduced 30-minute Practices in Action webinars, a shorter alternative that a few deep-dive practices reported were easier for busy practitioners to attend.

- **Developing group learning sessions that were relevant to practices at different stages of practice transformation and with different characteristics.**

  - **Different transformation stages.** Indicative of the challenge of tailoring learning to practices at different transformation stages, some practices arrived at the regional local launch sessions with rudimentary questions, including requesting details about the care management fees and how to access CPC+ Connect, and found it hard to follow the introduction of new change concepts, such as plan-do-study-act (PDSA) cycles. In contrast, other practices, such as those that had participated in CPC Classic or that had system-level staff focused on quality improvement processes, found the local launch sessions to be too rudimentary. Practice facilitators tried to mediate this concern by offering a range of breakout sessions during regional learning sessions to meet the needs of advanced practices and those early in their CPC+ implementation experiences.

  - **Different characteristics.** Several deep-dive practices noted that they could not relate to presentations from practices of a different size or structure (for example, small, independent practices had a hard time learning from large, system-owned practices).

## C. Tailored support

CPC+ practices have two avenues for receiving tailored support. For one, CPC+ practices can contact a centralized CPC+ help desk by email or phone if they have questions about CMS' CPC+ payment methodology, CPC+ participation or reporting requirements, or any other aspect of CPC+. Additionally, the RLN practice facilitators provided tailored support to individual or small groups of practices identified as needing additional coaching either over the phone or during site visits; this work is referred to as "practice coaching."

In 2017, to identify practices that needed coaching, the RLN leadership created a data dashboard, referred to as the Coaching Support Priority Tool (CSPT), that drew on care delivery requirement data submitted by practices to CMS and Medicare FFS cost and utilization data. The RLN central team used the data to categorize practices as priority (those needing the most assistance; 10 percent per region), moderate priority (35 percent per region), and low priority (55 percent per region). At a minimum, practice facilitators were required to provide the following support to practices:

- **Priority practices.** A 30-minute phone call every other week and quarterly site visits.
- **Moderate-priority practices.** A monthly, one-hour phone call.
- **Low-priority practices.** A light touch through group learning activities.

The RLN team classified practices at two points in time in 2017, first in June and then again in October.

In 2017, the RLN classified 16 percent of CPC+ practices as priority, with one-quarter of those practices classified as priority in both June and October. Our analysis of practices' priority ratings indicated that practices with fewer practitioners were more likely to be rated as priority, with 20 percent of practices with one to two practitioners, 16 percent with three to five practitioners, and 10 percent with six or more practitioners rated as priority at least once. We did not find that the probability of a practice being considered priority varied meaningfully across CPC+ tracks, practices' SSP status, and ownership (independent versus hospital- or system-owned).

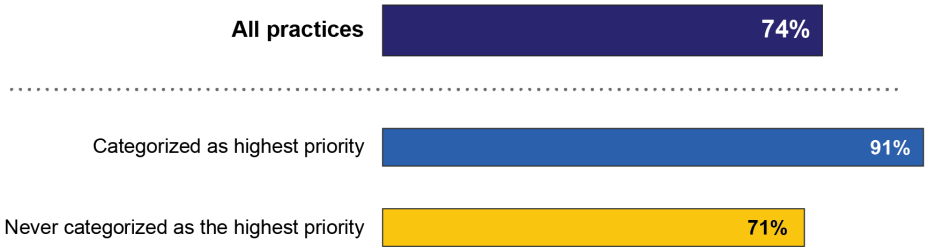
In 2017, practice facilitators expressed the following concerns with the practice classification process:

- **Accuracy of classifications.** Practice facilitators indicated that at times practices with medium or low priority classifications needed tailored assistance to meet benchmarks on CMS' quality and utilization metrics or to meet one or more care delivery requirements. Practice facilitators indicated that the classifications based on care delivery requirement data provided a useful starting point but that, drawing on the knowledge of practices that they developed during other learning activities, they identified additional practices that needed assistance.

- **Transparency of classifications.** In 2017, practices were not notified of their priority level, so practice facilitators could not be open with practices about why they were or were not receiving practice coaching. This approach was particularly challenging when moderate- or low-priority practices became aware that practice facilitators were visiting other practices and then requested coaching visits. Despite it not being required, most practice facilitators tried to fulfill those requests.

In part due to RLN identifying additional practices needing assistance or receiving requests for site visits from practices, the RLN conducted site visits to a high proportion of practices across CPC+ priority levels in 2017. Specifically, the RLN conducted an in-person site visit to 91 percent of practices rated as the highest priority in June and/or October 2017 (Figure 3.15). During this same period, the RLN also provided site visits to 71 percent of practices that never received the highest priority rating. Overall, 74 percent of CPC+ practices received at least one site visit during this period.

**Figure 3.15. Percentage of practices that received at least one in-person site visit from their RLN between July and December 2017, overall and by priority categorization**




Sources: Mathematica's analysis of data from CMS' Coaching Support Priority Tool Release 1, June 2017, and Release 2, October 2017 and CMS's Practice Coaching Logs, January–December 2017.

Deep-dive practices, many of which reported receiving practice coaching, described practice facilitators as important resources for helpful and timely information on CPC+.[33] Practices generally described receiving help from their RLN to adapt workflows and improve documentation within the EHR to meet certain eCQMs (see text box for additional details on RLN strategies for supporting CPC+ practices' efforts to undertake continuous quality improvement driven by data). The other topics practice facilitators covered with practices ranged widely depending on the practices' transformation stage and focus area and included help defining "active patients" for empanelment, implementing care management workflows, identifying a process for screening for patients' social determinants of health, using care delivery requirement data and utilization data feedback to identify areas for improvement, and spending CPC+ funds and compensating practitioners.

Deep-dive practices that reported *not* receiving practice coaching varied in their desire to receive this support. Several of these practices indicated they would like more one-on-one support with reviewing data to identify areas for improvements, rather than getting this support through webinars alone. In contrast, a few deep-dive practices, both system-owned and independent, indicated that they did not need CPC+ practice coaching and were happy to continue interacting with their CPC+ practice facilitator during group learning activities only. These practices generally already have relationships with practice facilitators affiliated with other payers' transformation initiatives who meet their needs for CPC+, and did not feel the need to work with an additional practice facilitator.

Practice facilitators commonly reported that practice coaching was the most effective learning support for helping practices make improvements in care delivery. Practice facilitators thought practices feel more comfortable sharing questions and concerns in a one-on-one or small group environment, noting that regular contact with

**"… The majority of practices, I'm finding, do really thrive off of having someone to check in with once, even if it's just once a month, to really say, 'Yes, you are on track with this model. Look at those changes that you've made from the beginning of the month to the end of the month.'"**

***–CPC+ practice facilitator, 2017***

[33] The sample of 30 deep-dive practices that we asked about learning supports included a priority practice, 7 moderate-priority practices, and 21 low-priority practices at the time of our interviews.

practice facilitators helps the practice maintain momentum, be accountable, and stay engaged as they can identify progress and growth over time. Finally, practice facilitators reported that practices find it helpful when the facilitators are able to share tools and explain how these tools are relevant to their unique patient population.

Practice facilitators identified several factors that contributed to effective practice coaching:

- **Trusted relationships with practices.** Practice facilitators worked to build relationships with practices, and as those relationships grew, practice members increasingly relied on practice facilitators to answer their questions.

- **Engaged CPC+ champions at the practice level.** Practices identified practitioners or staff, which CMS refers to as "CPC+ champions," to lead their CPC+ work at the practice site. Practice facilitators indicated that these CPC+ champions helped them to integrate into the practice, understand the practice's needs, and motivate the practice to work on the CPC+ Comprehensive Primary Care Functions and care delivery requirements. Across practices, the practice member fulfilling the role of CPC+ champion varied from practitioner to practice manager to nursing staff to quality improvement staff. In system-owned practices, practice facilitators reported that they often had to gain the trust of system-level leadership before they were able to engage with practice-level CPC+ champions (see text box on system-level staff engagement in learning activities for additional information).

  **"It's all about building relationships, and once you've built that relationship with them and they are able to talk with you, you become kind of an extension of their practice, they can rely on you to say, 'OK, I just did this, is this right? How else can we do it?'"**

  ***—CPC+ practice facilitator, 2017***

- **Engaged practitioners and care managers.** Practice facilitators found that practitioners could influence how the practice operates, and, when they were familiar with Comprehensive Primary Care Functions and care delivery requirements, they could help the practice achieve change. However, in some practices, it was difficult for practice facilitators to convince practitioners to participate in the practice coaching meetings, because they did not have time or an incentive to participate. Compared with practitioners, care managers were more likely to engage in practice coaching and attended more learning sessions. However, some practice facilitators faced challenges with engaging care managers in practices that hired a care manager for the first time and did not understand the care manager's role, and in systems that have centralized care management, which created challenges for communicating directly with care managers.

  **"[The care managers are] really the heavy lifters in a lot of the CPC+ work.**

  ***—CPC+ practice facilitator, 2017***

### Closer look: Regional Learning Network strategies for supporting continuous quality improvement driven by data

**Using payer feedback to support continuous quality improvement**

- During regional learning sessions, practice facilitators demonstrated how to log on to the CPC+ Practice Portal and download CMS data feedback and showed practices how to review their numbers of attributed patients and compare practice-level measures with regional-level measures.
- During practice coaching sessions, practice facilitators spent time identifying who in the practice should review data feedback, walking practices through how to review the feedback, helping them understand the key takeaways, and discussing how the information in reports can become actionable and guide practice improvements.

**"[Practices] reach out and they say, 'We don't know how to do this,' or we're reaching out to them saying, 'Hey, we see you haven't downloaded your feedback report, do you need help?' And then it's really just walking them through what each of the tabs can do for them, or helping them analyze their data and identify [whether] there's a true trend that's taking place or not, and then working with them in terms of what they feel like they can do to focus on improvement."**

***—CPC+ practice facilitator, 2017***

**Using eCQMs to support continuous quality improvement**

- Although practices were required to report electronic clinical quality measures (eCQMs) annually, some practice facilitators encouraged practices to review eCQM reports at least twice a month to monitor their improvement efforts. For example, one practice facilitator reviewed an eCQM report with a practice and identified a need to increase breast cancer screenings. The practice facilitator helped the practice design a workflow to increase the number of patients receiving breast cancer screenings and track the breast cancer screening eCQM as they implemented the workflow.
- The practice facilitators in one region developed a number of resources to support practices in reporting eCQMs:
  - The practice facilitators brought together practices and four of the electronic health record (EHR) vendors in their region for a workshop on eCQMs. Each of the vendors explained how to capture and document the eCQMs in their EHR.
  - Practice facilitators asked EHR vendors to create one- to two-page "tip sheets" to instruct practices on how to document eCQMs in their EHR.

  The practice facilitators created an Excel spreadsheet that helped practices to (1) understand the data elements for each eCQM, including exclusions, numerator, denominator, and the initial patient population, and (2) automatically calculate their progress against the eCQM performance benchmarks for performance-based incentive payments.

## 3.6. Health IT support for CPC+ practices

CMS requires CPC+ practices to use health IT to help support comprehensive primary care. CMS required both Track 1 and Track 2 CPC+ practices to use certified EHR technology to participate in CPC+ and to report eCQMs to CMS in 2017. At the outset of CPC+, CMS also described plans to require Track 2 practices to use additional enhanced health IT functionality to support their work in later years of CPC+ (2018 or 2019, depending on the functionality). Specifically, in 2017, CMS described seven enhanced health IT functionalities, two each related to the Comprehensive Primary Care Functions of access and continuity and care management, and one each for the remaining functions (comprehensiveness and coordination, patient and caregiver engagement, and planned care and population health; Table 3.8). (In 2018, CMS refined the CPC+ health IT requirements and delayed some deadlines.[34])

CMS required each Track 2 practice to formally partner with one or more health IT vendors that committed to providing required functionalities and supporting practices in their use. In 2017, Track 2 practices partnered with approximately 66 health IT vendors that agreed to help them use health IT to support the Comprehensive Primary Care Functions. As health IT vendors offer different functionalities to support the functions, practices can partner with multiple vendors to meet CPC+ care delivery requirements. Although Track 2 practices have more intensive health IT requirements, health IT vendors support practices in both tracks through the vendors' participation in CPC+ learning activities.

We conducted interviews with 13 vendors (representing 83 percent of Track 2 practices) from November 2017 through February 2018 to understand how health IT vendors supported CPC+ practices during 2017. To obtain a range of perspectives, we spoke to vendors partnering with different numbers of CPC+ practices (ranging from 2 to more than 500) and offering different product types (such as a full-featured EHR or population health or analytic software for panel management, information exchange, and reporting). We draw on these vendors' experiences to describe the type of support vendors provided to CPC+ practices. First, we describe the health IT functionality that vendors had available at the end of 2017 to support the five functions and their plans to improve that functionality. Then, we describe how health IT vendors were partnering with practices to help them meet health IT-related CPC+ requirements. Finally, we describe practices' perspectives on health IT vendor support.

### 3.6.1. What health IT functionalities are available to support comprehensive primary care?

Most vendors indicated that they had features available in their products prior to the start of CPC+ that could support practices' work on each of the five Comprehensive Primary Care Functions. Most vendors reported that they had more advanced functionality to support empanelment and risk stratification at the outset of CPC+ than to support other aspects of CPC+. Several vendors noted they were more likely to have functionalities in place in 2017 for the

[34] CMS announced significant refinements to its CPC+ health IT requirements in 2018, after we completed our vendor and practice interviews. This annual report focuses on the health IT requirements that were in place as of 2017.

CPC+ health IT requirements that were aligned with requirements for other programs, such as the National Committee on Quality Assurance's (NCQA's) PCMH recognition.

Most health IT vendors that we interviewed indicated that they had made improvements to their health IT functionality to better support CPC+ practices and/or planned to do so in future years. Health IT vendors had plans to improve their products to meet CPC+ health IT requirements and/or to make their products easier to use. Without this work, practices might have been unaware of or unable to effectively use existing health IT to support comprehensive primary care. During the first year, health IT vendors focused on developing new eCQM reporting dashboards for CPC+. Many vendors reported future plans to adjust their care plan templates to include all fields required for CPC+.

Although most vendors had plans to develop or improve health IT functionalities for CPC+, vendors also described several challenges to doing so in time for the CMS deadlines starting in 2018.

- **Many vendors reported challenges developing or enhancing CPC+ functionalities when there was not a corresponding clinical or industry standard.** This tension was present in some way for many required health IT functionalities. For example, many vendors noted that practices have different preferred risk-stratification algorithms. Similarly, a number of vendors working on care plan functionality noted that there is not a defined care plan template that is widely accepted by primary care practices.

- **Several vendors felt some CPC+ health IT requirements outlined in 2017 went beyond what practices needed and wanted.** For example, several vendors questioned whether practices would use all of the fields required in their care plan templates or detailed psychosocial needs assessments.[35] In some cases, these vendors indicated there may not be a clear business case to making these enhancements, because other practices would not be interested in them, as well. Vendors are responding to these concerns in different ways.

    - A handful of vendors described plans to obtain input from CPC+ practices on CPC+ health IT requirements during the development process.
    - Several vendors are making CPC+ functionalities that they view as primarily or exclusively useful for CPC+ (such as eCQM reporting tools or new care plan templates) available for an additional charge through add-on products. In contrast, vendors reported that functionalities that they viewed as broadly useful for primary care practices—such as risk-stratification enhancements—were integrated into existing products and available at no extra charge.

[35] In 2018, CMS removed some of the health IT CPC+ requirements related to care plans that vendors expressed concerns about in 2017.

- **Several vendors indicated that competing priorities made it difficult to develop CPC+-specific changes to their products.** Most commonly, these vendors noted that they were focused on meeting 2015 Edition EHR certification criteria (which all CPC+ practices will need to use by January 2019) but were not yet able to develop additional CPC+ functionalities, such as new care plan templates, specifically for Track 2 practices.

- **Although most vendors were satisfied with the level of communication from CMS, several vendors indicated that additional guidance from CMS on CPC+ requirements would be helpful.** A few vendors indicated that CMS had taken a long time to respond to questions about CPC+ health IT requirements that the vendors had posted on the CPC+ web-based collaboration platform, or that responses were vague. Another vendor felt like CMS was not clear that it wanted vendors to start working with practices early on in CPC+ and was caught off guard when practices asked questions about CPC+ health IT requirements that the vendor felt unprepared to address.

**Closer look: Are CPC+ health IT functionalities available to practices not participating in CPC+?**

Vendors are generally making CPC+ health IT functionalities—both those that existed prior to CPC+ and those that they develop for CPC+—available to other practices.

Vendors viewed most of the CPC+ health IT functionalities—most notably functionalities related to patient empanelment and risk stratification—as broadly useful for primary care practices. Vendors also indicated that CMS' related requirements for these functionalities were well aligned with requirements for other primary care transformation programs. Vendors typically built these CPC+ health IT functionalities into existing standard products that both CPC+ and non-CPC+ practices use and are available at no extra charge.

However, several vendors felt a few CPC+ health IT requirements—in particular, those related to electronic clinical quality measure (eCQM) reporting and care plan templates—went beyond what practices not participating in CPC+ needed and wanted. In these cases, vendors were offering them for an additional charge through add-on products that CPC+ practices could purchase to meet the CPC+ requirements. These add-on products were generally also available for purchase by non-CPC+ practices, but vendors did not anticipate much if any uptake.

**"Anything that we would develop for CPC+, we certainly would offer to other customers, as well…there are certainly items that we would deliver just as part of our standard release…If it's one of our product offerings and we're enhancing it [we would not charge for it], but if we felt like it was a brand new product offering and it was something that needed to be charged, then we certainly would do that."**

***—Health IT vendor, 2017***

In Table 3.8, we provide an overview of CPC+ health IT requirements, available functionalities, and planned improvements as of the end of 2017. In 2018, CMS refined the CPC+ health IT requirements and delayed some deadlines, so vendors' plans may have changed since the writing of this report.

## Table 3.8. CPC+ health IT requirements, available functionalities, and planned improvements, as of December 2017

### 1. Access and continuity

| | Empanelment | Alternatives to traditional office visits |
|---|---|---|
| In 2017, CMS indicated Track 2 practices would need to use health IT to[a]: | • Assign each patient to a practitioner and/or care team.<br>• Sort and review patients by assignment.<br>• See assigned providers or care teams in the patient record. | • Document care provided during alternatives to traditional office visits (such as during group, home, or telehealth visits or care that was provided over the phone or via a patient portal). |
| Date by which CMS originally indicated Track 2 practices would need to use functionality: | • July 2018 | • Encouraged, but not required |
| In December 2017, approximate proportion of vendors that reported their products met[b]: | • Some or all requirements: more than three-quarters<br>• All requirements: more than three-quarters | • Some or all requirements: around two-thirds<br>• All requirements: around half |
| Among those offering a functionality, key findings about what was available in 2017 | • All vendors indicated that their products offered empanelment to a practitioner. Several vendors indicated that their products could automatically empanel patients at this level. To do so, their products commonly drew on data practices entered in their EHR during routine visit documentation.<br>• Larger health IT vendors (those working with 100 or more CPC+ practices) reported practices could also use their products to empanel patients to care teams. Vendors indicated that this process was not currently automated, because the following factors made it more complex than assigning patients to practitioners: practices organize care teams in different ways, practitioners could be part of multiple care teams, and the composition of care teams can change over time. | • Most of these vendors reported that their products focused on capturing clinical data from alternative visits. For example, some vendors indicated that their products captured clinical data shared between practitioners and patients via their patient portal.<br>• A few vendors indicated that their products primarily captured data on alternative visits to support billing. For example, one vendor described its product's functionality in terms of documenting the amount of time staff spend on care management tasks (such as medication reconciliations) outside of in-person visits. |
| Examples of vendors' planned improvements | • A few vendors planned to add features to help practices track continuity of care over time.<br>• One vendor reported that it was planning to develop empanelment to care teams in the near future. | • A few vendors whose products did not have the ability to document alternative visits in 2017 planned to develop that functionality for CPC+. |

**Table 3.8.** ***(continued)***

## 2. Care management

| | Risk stratification | Care plans |
|---|---|---|
| In 2017, CMS indicated that Track 2 practices would need to use health IT to[a]: | • Assign risk scores to patients using a combination of an algorithm that automatically assigns risk scores and clinical intuition.<br>• Sort patients by risk score and update risk scores as needed.<br>• Flag and create lists of "complex patients" and/or those requiring episodic care management. | • Capture data and incorporate relevant triggers related to advance directives and preferences for care, patient concerns, goals and self-management plans, action plans for specific conditions, interventions and health status evaluations and outcomes, and identified care gaps.<br>• Capture date of last review or change in plan and generate scheduled date for reviewing and updating the plan to facilitate version control across care team members.<br>• Populate the care plan using data entered in the patient's record.<br>• Share the care plan with patients on paper and electronically, and with care team members, internal and external to the practice. |
| Date by which CMS originally indicated Track 2 practices would need to use functionality: | • July 2018 | • January 2019 |
| In December 2017, approximate proportion of vendors that reported their products met[b]: | • Some or all requirements: around three-quarters<br>• All requirements: around half | • Some or all requirements: around three-quarters<br>• All requirements: none |
| Among those offering a functionality, key findings about what was available in 2017 | • Most commonly, vendors reported that their products assigned risk scores to patients using either the American Academy of Family Physicians or Hierarchical Condition Category (HCC) risk-stratification models. A few vendors reported offering both options and allowing practices to select which model they wanted to use.<br>• A few vendors indicated that their products allowed practices to determine the cutoff for risk scores that the system would then automatically flag as high risk. | • Around half of vendors indicated that practices could customize care plans by, for example, adding fields to the existing care plan templates or adding or removing condition-specific modules.<br>• Several vendors reported that their care plans pulled data (such as labs, referrals, and problem lists) from other parts of the EHR, while a few explicitly noted that users must instead re-enter relevant data in the care plan.<br>• Most vendors indicated that care plans could be shared via patient and provider portals; other modes included sharing care plans through HIEs, bilateral interfaces, and registries. |
| Examples of vendors' planned improvements | • A few vendors reported plans to add algorithms for practices to choose from and/or to use additional data, such as claims or information on social determinants of health, to refine risk scores. | • Several vendors indicated that they were developing ways to streamline care plan creation by automatically pulling in data from other parts of the EHR or even other care settings. |

**Table 3.8.** ***(continued)***

| | 3. Comprehensiveness and coordination | 4. Patient and caregiver engagement | 5. Planned care and population health |
|---|---|---|---|
| In 2017, CMS indicated Track 2 practices would need to use health IT to[a]: | • Systematically assess patients' psychosocial needs.<br>• Inventory resources and supports to meet those needs. | • Administer a patient survey (that CMS would select).<br>• Store and track patient responses, and score results longitudinally.<br>• Review patient responses in the EHR or another tool. | • View eCQM results at the practice site level in an actionable manner that the care team can use to manage population health.[c]<br>• Update measure results to reflect progress. |
| Date by which CMS originally indicated Track 2 practices would need to use functionality: | • January 2019 | • Timeline not specified in 2017 | • July 2018 |
| In December 2017, approximate proportion of vendors that reported their products met[b]: | • Some or all requirements: around two-thirds<br>• All requirements: fewer than one-quarter | • Some or all requirements: fewer than one-quarter<br>• All requirements: fewer than one-quarter | • Some or all requirements: more than three-quarters<br>• All requirements**:** around half |
| Among those offering a functionality, key findings about what was available in 2017 | • Vendors commonly indicated that they had psychosocial needs assessments programmed into their products or available as optional templates.<br>• Only a few vendors indicated that practices could store inventories of community resources in their products. | • These vendors indicated that practices could use their products to administer patient surveys and track results. One of these payers explained that, once CMS made its questionnaire available, practices would be able to send it to their patients via their portal. | • Most vendors reported that they developed new eCQM dashboards for CPC+.<br>• Many reported that practices can customize the way they look at measures by running reports at different levels (such as by practitioner or patient population) and selecting which measures display on the dashboard. |
| Examples of vendors' planned improvements | • A few vendors reported plans to add new psychosocial needs assessments to their products.<br>• No vendors mentioned concrete plans to add the ability for practices to inventory community resources. | • At the time of our interviews, no vendors reported concrete plans to develop or improve on this functionality, in part because CMS had not yet selected a survey or specified the timeline for this work. | • Several vendors described plans to develop new CPC+ eCQM dashboards.<br>• A few vendors were developing pre-set queries that would make CPC+ eCQM reporting less time-consuming. |

Source: Mathematica's analysis of Health IT vendor interview data.

[a] In 2018, after we completed our vendor and practice interviews, CMS indicated that it was no longer planning to require practices to use health IT to support tracking of patient-reported outcome measures and reduced requirements for some of the remaining functionalities.

[b] We provide an approximate proportion of interviewed vendors that reported meeting some or all CPC+ requirements. We base our analysis on vendors' responses to open-ended interview questions about vendors' product functionalities, and not all vendors responded to each question; thus, we cannot calculate exact proportions.

[c] In 2017, both Track 1 and Track 2 practices were required to report eCQMs to CMS**.**

eCQM = electronic clinical quality measure; EHR = electronic health record; HIE = Health Information Exchange.

### 3.6.2. How are health IT vendors collaborating with CPC+ practices?

Health IT vendors collaborated with practices through CMS-sponsored learning activities (health IT Affinity Groups and CPC+ Connect) and through vendor-initiated forums. These activities provided a venue for educating practices about existing functionalities (such as automatic empanelment or risk-stratification features). RLN practice facilitators noted the importance of health IT vendor involvement in learning activities, indicating that RLN staff are not familiar enough with the functionality of each vendors' EHR to adequately help practices use them to support the Comprehensive Primary Care Functions. A few vendors also indicated that vendor-practice collaboration was mutually beneficial, as practices provided feedback to vendors on how to bridge the gap between technological solutions and clinical workflows.

**CPC+ health IT Affinity Groups.** The National Learning Team hosted health IT Affinity Groups during which practices met with each other and/or their health IT vendors to share experiences, resources, and solutions for using health IT for CPC+.

- **Which vendors participated?** According to CPC+ program data on learning activities, 17 out of the 66 health IT vendors that partnered with Track 2 practices participated in at least one CPC+ Affinity Group meeting in 2017. Ninety-five percent of Track 2 practices partnered with at least one of these vendors, reflecting that vendors that worked with a larger number of CPC+ practices were more likely to participate in Affinity Group meetings than smaller vendors and did so more frequently. All five vendors that worked with 500 or more Track 2 practices participated in Affinity Group meetings at least quarterly.

- **What were vendors' views on Affinity Groups?** Most vendors that we interviewed who reported participating in the Affinity Groups found them useful for supporting CPC+ practices. However, vendors had mixed opinions about the best use for meetings. For example, one vendor appreciated that the Affinity Group meetings were a forum for CMS to address both the vendor and the vendor's CPC+ customers at the same time, "so that everyone is on the same page." Another vendor felt that the meetings initially focused too much on CMS' announcements and did not allow sufficient time for vendor representatives to directly communicate with practices. Still, a third vendor highlighted that the major benefit of the EHR Affinity Groups is that the meetings allow CPC+ practices to engage with each other (as opposed to with the vendor) and share best practices.

**CPC+ Connect.** CPC+ Connect is a web-based platform that CPC+ practices, payers, health IT vendors, and contractors can use to communicate, raise questions, and share resources and information about CPC+.

- **Which vendors used CPC+ Connect?** All but one small EHR vendor that we interviewed reported using CPC+ Connect.

- **What were vendors' views on CPC+ Connect?** Although most vendors found CPC+ Connect to be useful, most also expressed some concerns with the tool. For example, two vendors believed that it fostered communication but was redundant with prior systems, as it basically created a second place for practices to ask questions they would normally ask through a vendor-specific communication platform. Other vendors balanced their appreciation of CPC+ Connect's usefulness for sharing information on process, workflow,

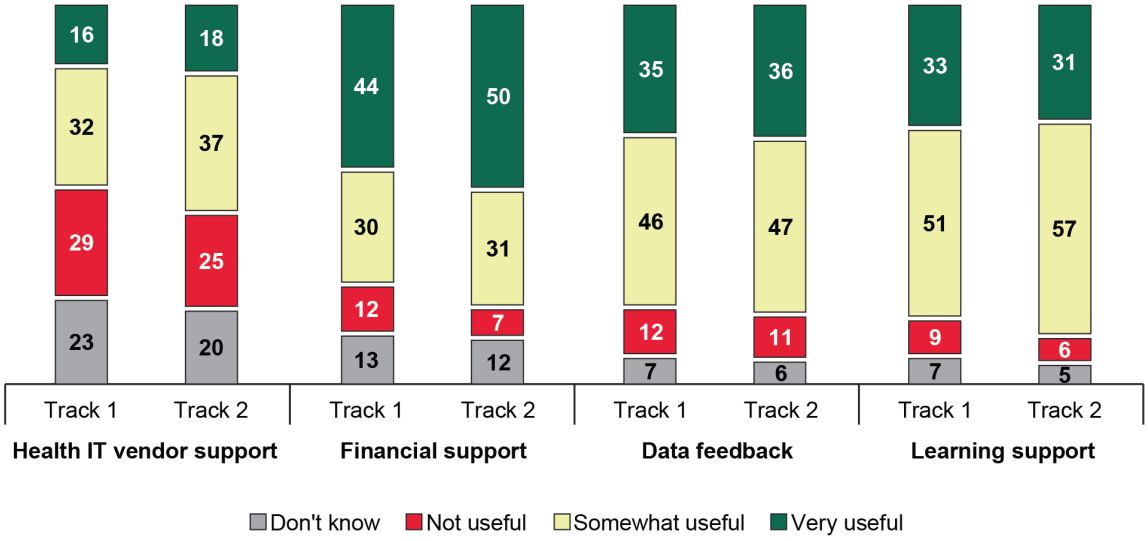
and care delivery requirements with practices against frustration with access issues, such as recurring log-in difficulty and lack of adequate or timely responses from the help desk on CPC+ health IT requirements.

**Vendor-initiated support.** In addition to CMS-brokered communication strategies, many interviewed vendors established special meetings (for example, during user conferences), and/or tools (such as program guides) for CPC+ practices that went beyond their standard communication supports for all customers.[36] Several vendors developed the same materials for and/or held the same meetings with Track 1 and Track 2 CPC+ practices; a few reported offering separate support by track, noting that those groups have different levels of sophistication with and CPC+ requirements related to health IT. One vendor indicated that its vendor-initiated meetings were useful for practices at the outset of CPC+, but as the vendor and its practices became more involved in CPC+ health IT Affinity Groups, it ultimately discontinued its separate support.

### 3.6.3. How do practices rate health IT vendor support?

Practices had mixed views of health IT vendor support, reflecting in part health IT vendors' challenges in developing or improving health IT functionalities in 2017. About half of CPC+ practices (48 percent of Track 1; 55 percent of Track 2) reported on the 2018 CPC+ Practice Survey that health IT vendor support was somewhat or very useful for improving primary care (Figure 3.16). This finding contrasts with the 75 percent or more of practices reporting that other CPC+ supports including financial support, data feedback, and learning support were useful.

**Figure 3.16. Percentage of CPC+ practices indicating that a CPC+ support is useful for improving primary care**




Source: Mathematica's analysis of 2018 CPC+ Practice Survey data.

[36] These CPC+-specific outreach activities supplement what vendors described as routine communication with their customers through mediums such as social networking platforms (similar to CPC+ Connect), blogs, alerts, user groups, email, newsletters, webinars, dedicated staff who work with practices, conferences, and phone calls.

Our in-depth qualitative interviews with deep-dive practices also painted a mixed view of practices' experiences working with health IT vendors. Deep-dive practices with more negative views of their vendors noted that vendors were slow to develop product enhancements and/or nonresponsive to questions about how to use existing functionalities to support comprehensive primary care. Independent practices tended to express more frustrations working with health IT vendors than system-owned practices, which often had system-level health IT staff that took responsibility for coordinating with EHR vendors. On the other end of the spectrum, several deep-dive practices indicated that they had productive relationships with their vendors, highlighting specific benefits as a result of their collaboration. For example:

- Several practices worked with their health IT vendor to develop tools to improve eCQM reporting. For example, one practice worked with its vendor to add a field to its EHR that allows the practice to document when a patient receives a test from a provider outside of the practice, so that the patient will be appropriately counted as having received the test in the relevant eCQM measure.
- A few practices reported working with health IT vendors to create dashboards that display automatic updates when patients are discharged from a hospital or emergency department to facilitate episodic care management.
- A handful of practices described working with EHR vendors to improve empanelment processes. For example, a system-level health IT specialist noted that its vendor helped the health system create a prompt that flags patients without an assigned practitioner.

(See Chapter 4 for additional detail on how deep-dive practices used health IT to support CPC+ implementation and the related challenges.)

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# 4. HOW DID CPC+ PRACTICES IMPLEMENT CPC+ PRIMARY CARE FUNCTIONS AND CHANGE THE WAY THEY DELIVER CARE IN 2017?

For CPC+, CMS requires participating practices to make many complex, interconnected changes in how they deliver care to their patients by focusing on CPC+'s five Comprehensive Primary Care Functions: (1) access and continuity, (2) care management, (3) comprehensiveness and coordination, (4) patient and caregiver engagement, and (5) planned care and population health. To promote progress on these functions, CMS specifies a series of care delivery requirements for practices in each track at the start of each year of CPC+. Practices were encouraged to view these care delivery requirements as a starting point, or minimum, to build on as they advance care delivery within each function. Practices had autonomy to decide which care delivery requirements or broader changes within each function to implement first, which staff to involve, and, for certain functions, which tactics to pursue.

In this chapter, we describe how practices that started CPC+ in 2017 implemented and approached care delivery changes across the five Comprehensive Primary Care Functions in the first intervention year. Although we cannot fully assess CPC+ implementation after just one year, we provide insight into the early implementation experiences of participating practices, drawing from analyses of three data sources: CPC+ care delivery reporting data and selected items from the 2018 CPC+ Practice Survey provide insight into how *all* CPC+ practices approached CPC+ in 2017; site visits to 81 deep-dive practices provide an in-depth look at how a *representative sample* of practices approached CPC+ implementation and the factors that influenced their work.

CPC+ practices generally liked the underlying concepts of CPC+, the additional funding they received, and the new staff it enabled them to hire. Many deep-dive practices first assessed their pre-existing work in each function to identify and prioritize areas they were not already addressing or needed to improve. For example, most practices found that they had already met many of the 2017 care delivery requirements regarding access to care and continuity of care, enabling them to prioritize efforts in the other four functions. Practices also reported that they focused on laying a foundation for practice transformation in the first year of CPC+, by setting up workflows, hiring new staff, and developing standardized procedures for tracking and reviewing data, if they were not already doing so. Track 1 and Track 2 practices were undertaking many of the same activities in the first year of CPC+, with many practices prioritizing work on care management (often focusing on risk stratification and hiring and deploying care managers). At system-owned practices, the systems often required and designed a standardized approach to CPC+ implementation across their participating practices; independent practices had more autonomy to customize their approach.

Participating practices actively embraced CPC+ implementation and made progress on each of the five Comprehensive Primary Care Functions but found some of the work burdensome and, as anticipated, have room for improvement in the next four years. Many practices found that meeting the care delivery, financial reporting, and health IT requirements was burdensome. Areas where practices have more room for improvement include expanding the use of alternatives to traditional office visits, expanding care management to more of their higher risk patients, further integrating behavioral health into primary care, and enhancing their capabilities to address patients' health-related social needs and help patients self-manage their health.

In Sections 4.1 to 4.3 of this chapter, we provide an overview of our findings, describe the CPC+ functions and first-year care delivery requirements, and summarize the methods we used for the analyses. In Section 4.4, we describe the practices' overall impressions of CPC+. In Section 4.5, we describe how practices are prioritizing elements of the CPC+ work and their general approaches to implementing CPC+ overall. In Section 4.6, we provide a function-by-function look at how practices are approaching the care delivery requirements and related changes. In Section 4.7, we describe the factors influencing care delivery transformation across the functions and offer insights on the implications for the remaining four years of CPC+. Finally, in Section 4.8, we offer early insights on sustainability of CPC+ care delivery transformation.

## 4.1. Key takeaways on how practices are transforming care

- **Practices' overall impression of CPC+.** Practices reported they were satisfied with their decision to join CPC+ and already perceived improvements from participating, yet they noted that the work is challenging. Nearly all practices (93 percent) reported in response to the 2018 CPC+ Practice Survey that CPC+ improved quality of care, with 43 percent saying it improved care "a lot." Additionally, based on their overall experience with CPC+, 64 percent of practices would be "very likely," and another 28 percent would be "somewhat likely," to participate in CPC+ again if given the opportunity. However, many practices found that meeting the care delivery, financial reporting, and health IT requirements was burdensome. Several deep-dive practices reported that staff were supportive of CPC+ despite any increase in workload it caused, and some said the extra effort was worth the payoff in improved patient care.

- **Practices' overall approach to CPC+.** Practices assessed their pre-existing work to identify areas to focus on first and how to prioritize their overall approach in 2017. The deep-dive interviews asked practices about any broader efforts they were making to transform care within each function. Practices were ramping up and reported they were primarily focused on the care delivery requirements during the first implementation year. Many practices identified care delivery requirements that they met or came close to meeting before CPC+, which allowed them to focus on requirements that would entail more effort. Several deep-dive practices focused first on care delivery requirements that were "quick and easy" to achieve, explaining that these "early wins" could build confidence and catalyze staff buy-in for more complex requirements planned for the future. Most practices were working on multiple functions at once.

  Implementation approaches varied for system-owned versus independent practices. Many systems adopted a standardized approach to CPC+ implementation across their practices, which helped ensure consistency in care delivery but each limited practice's autonomy to define changes for its individual site. In contrast, independent deep-dive practices described engaging practitioners and staff in the prioritization process and having greater autonomy than system-owned practices to make CPC+ changes tailored to their practice's population, such as selecting their own risk-stratification methods or designing or modifying care plan templates to meet their practice's population's needs.

- **Practices' approaches to the CPC+ functions.** Although Track 1 and Track 2 practices focused on the same five Comprehensive Primary Care Functions, the Track 2 practices were generally required to complete additional work or transform more deeply for each function. During the first year of CPC+, many practices across both tracks prioritized work on care management (often focusing on risk stratification and hiring and deploying care managers) and comprehensiveness and care coordination. Though it was not a requirement for Track 1 practices, practices in both tracks were also focused on integrating behavioral health into primary care. Additionally, Track 2 practices reported that they worked on requirements specific to Track 2, such as increasing the use of collaborative care agreements with specialists and assessing patients' psychosocial needs.

  We highlight below practices' work on care delivery requirements within each of the five functions. We indicate notable differences by CPC+ track; when we do not mention this kind of variation, the findings reported were similar for practices in Track 1 and Track 2. (Table 4.1 provides more detail on the requirements for each function.)

**Access and continuity.** CPC+ defines a*ccess to care* as the timely use of needed care, while *continuity of care* refers to a continuous relationship between the patient and the team of professionals who provide longitudinal care. In 2017, nearly 90 percent of practices reported they had empaneled (that is, assigned each patient to a practitioner and/or care team) at least 95 percent of their active patients. Additionally, virtually all practices reported they provided 24/7 access to a care team practitioner with access to the electronic health record (EHR). Although deep-dive practices saw the value in alternative visits (a Track 2 requirement), they had not yet shifted to using them much.

**Care management.** CPC+ requires two approaches to care management. Shorter term "episodic" care management focuses on acute care events such as emergency department (ED) visits and hospitalizations. Longitudinal care management is more intensive and relationship-based, for patients identified as higher risk who would benefit from ongoing, proactive care management. Care teams in CPC+ work with patients receiving care management to document goals, preferences, and values in a care plan.

  - **Episodic care management.** Deep-dive practices were consistently implementing short-term ("episodic") care management for patients who had recent hospital admissions, ED visits, or a new condition likely to benefit from care management. In line with CPC+ requirements, practices most often identified patients for episodic care management based on hospital admissions (98 percent of practices), ED visits (92 percent of practices), or the presence of a new condition likely to benefit from care management (75 percent of practices). Most deep-dive practices took similar approaches to episodic care management, using follow-up phone calls to check on the patient's condition, provide medication reconciliation, educate on appropriate ED use, schedule follow-up primary care and specialist appointments, and assist with access to social services as needed.

- **Longitudinal care management.** Almost all practices (97 percent) reported they used a data-driven algorithm as part of their approach to risk stratify patients to identify those at higher risk who would benefit from more intensive, relationship-based ("longitudinal") care management. In system-owned practices, it was common for multiple practices in the same system to share one or more care managers, across CPC+ and non-CPC+ practices. Whereas some independent practices hired new care managers for their practice, other independent practices did not have the resources to hire a care manager; therefore, the existing practitioners and staff had to absorb the burden of this work on top of their usual work. Deep-dive practices reported some common challenges to providing longitudinal care management to high-risk patients, including inadequate numbers of care managers, competing priorities for care managers' time (due to both unclear definitions of care managers' roles and the size of patient caseloads), care manager turnover, and patients' reluctance to engage in care management. As expected in the first year of the initiative, practices were still developing their care management capacity, and just over one-third of those patients identified as being at the highest risk were under longitudinal care management.

- **Care plans.** Many deep-dive practices in both tracks were not yet systematically using care plans that document and track the needs of and actions taken to support patients receiving ongoing care management. Often, practitioners and staff were confused about what a "care plan" is and/or resisted adopting care plans, because they felt that (1) the information that a care plan would include already existed in other parts of the EHR, or (2) they knew their patients well enough that they did not need a formal care plan.

**Comprehensiveness and coordination.** "Comprehensiveness" refers to a practice meeting the majority of its patients' medical and behavioral health needs in pursuit of each patient's health goals (CMMI 2017). "Coordination" refers to the primary care practice's central role in helping patients and caregivers navigate the health care system, including identifying and communicating with specialists and assisting with care transitions and follow-up after hospital and ED discharges.

- **Comprehensiveness.** Many practices took steps to integrate behavioral health into their practice, typically using a combination of strategies consistent with the Primary Care Behaviorist model.[37] And, although behavioral health integration was not a requirement, Track 1 practices pursued this strategy, as well. Practices' ability to integrate behavioral health care was hampered by the lack of available psychiatrists and behaviorists of all types in many regions.

[37] CPC Classic and Track 2 practices were required to choose at least one of two strategies for behavioral health integration within the practice: (1) the Primary Care Behaviorist model, where a behavioral health provider (such as a psychologist or clinical social worker) is integrated into the primary care workflow through warm handoffs and co-location, or (2) the Care Management for Mental Illness model, in which the primary care practitioner is the treating provider who works with a care manager (often a nurse trained in behavioral health) and a psychiatrist who supports the care manager, provides decision support, and is linked to this primary care team both telephonically and through the EHR.

In terms of addressing social needs, an important aspect of comprehensiveness, 67 percent of Track 2 practices reported that they met the Track 2 requirement of incorporating into their EHR screenings for social needs (such as housing, food insecurity, and transportation), but several Track 2 deep-dive practices felt that their EHR lacked the functionality to track that information over time. Additionally, most CPC+ practices maintained or had access to an inventory of social services resources.

- **Care coordination.** Almost three-quarters of CPC+ practices are using collaborative care agreements (plans that set expectations about roles and information sharing between providers across settings) to support coordination of care with some specialists. Some deep-dive practices reported adding new staff in 2017 to help manage specialist referrals, tracking, and follow-up. However, many deep-dive practices had not used payer reports on high-volume, high-cost specialists to alter their referral decisions, preferring to use practitioners' judgment and experience to guide their decisions.

**Patient and caregiver engagement.** CPC+ encourages patient and caregiver engagement in health care delivery by requiring practices to involve patients and caregivers in efforts to guide practice improvement and to integrate self-management support into usual care. *Patient and caregiver involvement in practice improvement* aims to draw on the experience and expertise of patients and their caregivers to identify the strengths of practices, offer insights on areas for improvement, and provide ideas for solutions. *Self-management support* aims to enhance patients' willingness and ability to manage their own health care. Nearly all practices tried to elicit input directly from patients who receive care at the practice, their family members, and/or caregivers by establishing Patient and Family Advisory Councils (PFACs), and most deep-dive practices reported making changes in response to patient and caregiver feedback from PFACs, patient surveys, or other sources. Only a few deep-dive practices reported that they had assessed their capabilities and plans for supporting patients with chronic conditions in managing their health day to day (self-management support), although many practices reported various steps they were taking to provide this kind of support.

**Planned care and population health.** Planned care and population health refers to organizing care delivery to meet the needs of the practice's entire patient population. Nearly all deep-dive practices used payer feedback and electronic clinical quality measure (eCQM) data to (1) improve quality at the point of care for individual patients and (2) identify opportunities for improving existing services at the practice. Consistent with it being a requirement for them, Track 2 deep-dive practices also reported that in 2017 they focused more on using data during care team meetings to guide the testing of tactics to improve care than before CPC+, although several practices thought CMS' requirement for a weekly meeting was burdensome.

- **Factors influencing CPC+ implementation**
  - **Factors supporting implementation.** Many deep-dive practices benefited from the alignment between CPC+ and other transformation efforts such as Patient-Centered Medical Home (PCMH) programs. Practices that were using EHRs with robust features and functions to support administrative tasks, clinical care, quality improvement, and population health efforts also had an easier time implementing CPC+ requirements, as did practices that had someone who championed CPC+ and a culture that embraced the model. Finally, because they tended to have greater access to resources that supported CPC+ implementation—such as staffing for care management and behavioral health integration, data analytics capabilities, and health information technology (health IT) and quality improvement (QI) resources—many system-owned practices faced fewer struggles than independent practices in identifying resources for implementing care delivery requirements.
  - **Factors hindering implementation.** As with any new effort, practices also encountered challenges to changing care delivery across the five CPC+ Comprehensive Primary Care Functions. For example, some deep-dive practices struggled with some of the care delivery requirements in the first year of CPC+ because they either did not understand them (care plans, for example), or felt that some requirements (such as risk-stratification algorithms, and for some practices, care plans) forced a "one-size-fits-all" approach to care that interfered with clinical judgment and did not enhance quality of care. Practices without robust EHR functionalities faced challenges implementing some elements of the CPC+ functions—particularly, risk stratification, creating care plans and sharing them across primary care team members, and reporting eCQMs. Additionally, a few independent deep-dive practices noted that they lacked the resources to update the EHR as needed. Therefore, they had to use manual processes, for example, to track gaps in care. Practices with limited ability to exchange data across settings experienced challenges communicating with specialists and hospitals outside of their own organization.

    Finally, changes in payment approaches that continue to emphasize quality over quantity throughout the health care system would improve practices' ability to implement the CPC+ model. Several deep-dive practices from hospital-owned and multispecialty systems acknowledged that the CPC+ goals to reduce hospital/ED use and to limit nonessential referrals to specialists posed challenges to their systems' bottom lines, which still depended heavily on volume-based incentives. Both system-owned and independent practices reported that the financial incentives of specialists and hospitals are barriers to CPC+ practice efforts to reduce total patient costs, which affected their efforts to reduce hospital and ED admissions and to limit nonessential referrals to specialists. Increasing shifts away from current fee-for-service (FFS) payments outside of CPC+ toward value-based payment are needed to align the incentives across the primary care, specialty, and hospital providers who treat CPC+ practices' patients.

## 4.2. CPC+ functions and care delivery requirements for 2017

The CPC+ care delivery requirements provide a set of minimum stepping stones for practices to deepen their capabilities over the five intervention years. These incremental requirements guide practices as they implement the five Comprehensive Primary Care Functions and serve as markers for minimum steps needed to make regular, measurable progress toward CPC+ aims. Table 4.1 lists the care delivery requirements for the first year of CPC+, for Track 1 and Track 2 practices. As we note in Table 4.1, CPC Classic practices participating in Track 1 are expected to build on their CPC Classic work, as reflected in CMS' requirement that Track 1 CPC Classic practices satisfy some of the additional Track 2 requirements.

**Table 4.1. Comprehensive Primary Care Functions and care delivery requirements in the first year of CPC+, by CPC+ track**

| Function | Track 1 care delivery requirements | Track 2 care delivery requirements |
|---|---|---|
|  **1. Access and continuity** | 1.1. Achieve and maintain at least 95 percent of active patients[a] empaneled to a practitioner[b] and/or care team.<br>1.2. Ensure that patients have 24/7 access to a care team practitioner with real-time access to the electronic health record (EHR).<br>1.3. Organize care by practice-identified teams responsible for a specific, identifiable panel of patients to optimize continuity. | Track 1 Requirements 1.1–1.3, plus:<br>1.4. Regularly offer at least one alternative to traditional office visits to increase access to care team and practitioners in a way that best meets the needs of the population, such as eVisits, phone visits, group visits, home visits, alternate location visits (for example, senior centers and assisted living centers), and/or expanded hours in early mornings, evenings, and weekends. |
|  **2. Care management** | 2.1. Risk stratify all empaneled patients.<br>2.2. Provide targeted, proactive, relationship-based (longitudinal) care management to all patients who are identified as at increased risk, based on a defined risk-stratification process, and who are likely to benefit from intensive care management.<br>2.3. Provide short-term (episodic) care management along with medication reconciliation to a high and increasing percentage of empaneled patients who have an emergency department (ED) visit or hospital admission/ discharge/transfer and who are likely to benefit from care management.<br>2.4. Ensure that patients with ED visits receive a follow-up interaction within one week of discharge.<br>2.5. Contact at least 75 percent of patients who were hospitalized in target hospitals within two business days. | 2.1. Use a two-step risk-stratification process for all empaneled patients:<br>Step 1 is based on defined diagnoses, claims, or another algorithm (not care team intuition).<br>Step 2 adds the care team's perception of risk to adjust patients' risk stratification, as needed.<br>Track 1 Requirements 2.2–2.5, plus:<br>2.6. Use a plan of care centered on the patient's actions and support needs in management of chronic conditions for patients receiving longitudinal care management. |

**Table 4.1.** ***(continued)***

| Function | Track 1 care delivery requirements | Track 2 care delivery requirements |
|---|---|---|
|  **3. Comprehensiveness and coordination** | 3.1. Systematically identify high-volume and/or high-cost specialists serving the patient population using CMS or other payer's data.<br>3.2. Identify hospitals and EDs responsible for most patients' hospitalizations and ED visits, and assess and improve timeliness of notification and information transfer using CMS or other payer's data.<br>Track 1 Classic[c]: also Track 2 requirements 3.3 and 3.4 | Track 1 Requirements 3.1–3.2, plus:<br>3.3. Enact collaborative care agreements with at least two groups of specialists identified based on analysis of CMS or other payer reports.<br>3.4. Choose and implement at least one option from a menu of options for integrating behavioral health into care.<br>3.5. Systematically assess patients' psychosocial needs using evidence-based tools.<br>3.6. Conduct an inventory of resources and supports to meet patients' psychosocial needs.<br>3.7. Characterize important needs of subpopulations of high-risk patients, and identify a practice capability to develop that will meet those needs and can be tracked over time. |
|  **4. Patient and caregiver engagement** | 4.1. Convene a Patient and Family Advisory Council (PFAC) at least once in the first intervention year, and integrate recommendations into care, as appropriate.<br>4.2. Assess practice capability and plan for support of patients' self-management.<br>Track 1 Classic: also Track 2 requirements 4.1 and 4.2 | 4.1. Convene a PFAC in at least two quarters in the first intervention year and integrate recommendations into care, as appropriate.<br>4.2. Implement self-management support for at least three high-risk conditions. |
|  **5. Planned care and population health** | 5.1. Use feedback reports provided by CMS or other payers at least quarterly on at least two utilization measures at the practice level and practice data on at least three electronic clinical quality measures (eCQMs, derived from the EHR) at both the practice and panel levels to inform strategies to improve population health management. | Track 1 Requirement 5.1, plus:<br>5.2. Conduct care team meetings at least weekly to review practice- and panel-level data from payers and internal monitoring and use these data to guide testing of tactics to improve care and achieve practice goals in CPC+. |

Source: Center for Medicare & Medicaid Innovation. "CPC+ Care Delivery Requirements." 2017. Available at https://innovation.cms.gov/Files/x/cpcplus-practicecaredlvreqs.pdf.

[a] Active patients refers to patients who received primary care at the practice during a defined look-back period, usually the prior 18 to 36 months.

[b] Practitioners include physicians, nurse practitioners, physician assistants, and clinical nurse specialists.

[c] CPC Classic practices participating in Track 1 are expected to build on their CPC Classic work, as reflected in CMS' requirement that Track 1 CPC Classic practices satisfy some of the additional Track 2 requirements.

**Health IT insights: Using health IT to support CPC+ implementation**

In 2017, CMS required CPC+ practices to use certified electronic health record (EHR) technology to participate in CPC+ and to report on electronic clinical quality measures (eCQMs). CMS also described plans to require Track 2 practices to use additional enhanced health IT functionality to support their work in later years of CPC+ (2018 or 2019, depending on the health IT functionality). Specifically, CMS described seven enhanced health IT functionalities, two each related to the CPC+ functions of access and continuity and care management, and one each for the remaining CPC+ functions.

See Chapter 3, Table 3.8, for the CPC+ health IT requirements for later years of CPC+, as well as the health IT functionality that the 13 vendors we interviewed had available as of December 2017 and their plans to improve it.

## 4.3. Methods

In this chapter, we present findings that draw on the analysis of three data sources: (1) the data CPC+ practices reported on their progress transforming care delivery, (2) site visits to 81 deep-dive practices selected for intensive qualitative study, and (3) the 2018 CPC+ practice survey.

1. **CPC+ care delivery reporting data provide insight into how *all* CPC+ practices approached CPC+ in 2017.** Following each quarter of 2017, CMS required practices to answer a series of questions about care delivery to understand how practices were approaching the five CPC+ functions. Some questions focused on 2017 care delivery requirements, whereas others asked about care delivery processes related to the CPC+ functions but not required for 2017. CMS asked most questions in more than one quarter. For each question, we report the most recently available data for 2017; most often these data pertain to practices' experiences in the third or fourth quarter of 2017. Appendix 4.A includes tables with detailed findings for all practices, as well as by track and Medicare Shared Savings Program (SSP) status.

2. **Site visits to deep-dive practices provide an in-depth look at how a representative sample of practices approached CPC+ implementation and the factors that influenced their work.** We conducted 1- to 1.5-day site visits in spring 2018 with 81 practices that started CPC+ in 2017. We refer to these practices selected for intensive qualitative study as "deep-dive practices." We selected the deep-dive practices to be similar to all CPC+ practices in terms of track, participation in the SSP, whether they were independent or owned by a system or hospital or part of a multipractice group, and size. We used nine interview modules to guide our discussions with practices, one each covering the five CPC+ functions, one each on payment and learning supports, and two special topics on the use of specialists and teamwork. To ensure that we covered topics in each module in depth, we administered only three or four modules to each deep-dive practice, allowing us to gather detailed information for each module from about 30 diverse practices. We typically interviewed six to eight respondents per practice, including a practitioner lead and other practitioners, CPC+ coordinators (many practices or systems had created this type of position), care managers, practice managers, health IT

staff, and (when relevant) system-level representatives such as a chief medical officer or population health lead. (See the Appendix 4.B for details on the deep-dive practice study methods.)

3. **CPC+ practice survey data provide insight about how *all* practices *perceived* CPC+.** The CPC+ survey is fielded annually to all CPC+ practices and, among many topics, includes items focused on practice experiences with and perspectives on CPC+.[38] We fielded the 2018 CPC+ Practice Survey, which asked practices about their perspectives on the first year of CPC+, from June through September 2018.

Throughout the chapter, we followed two key principles when reporting findings:

- **Variation by practice characteristics.** When analyzing findings on a given topic from CPC+ care delivery requirement reporting, deep-dive, and practice survey data, we considered whether findings varied in meaningful ways for different types of practices, particularly whether practices were in Track 1 or Track 2; part of a system or independent; participating in SSP; and small, medium, or large. Throughout this chapter, we describe notable differences by practice type; when we do not mention this kind of variation, the reader should assume that the findings reported were similar across different types of practices.

- **Terminology.** When reporting on findings from qualitative interviews with respondents for deep-dive practices, we use the word "few" to denote 3 to 4 practices, "several" to denote 5 to 10 practices, "many" to denote more than 10 but fewer than three-fourths of relevant practices, and "most" to indicate more than three-fourths of practices. For most topics, we have data from roughly 30 practices, but it is important to keep in mind that qualitative interviews differ from surveys in that the approach is more free-flowing and conversational, not every question is asked of every respondent, and respondents sometimes mention things that were not asked about directly. Hence, the number of practices with data for a given deep-dive finding varies, and we considered this factor carefully when characterizing the relative prevalence of a given finding among practices.

## 4.4. Practices' overall impressions of CPC+

In this section, we describe the practices' overall impressions of CPC+ including their satisfaction with their decision to join the CPC+ initiative and their perceptions of the value of their participation to date.

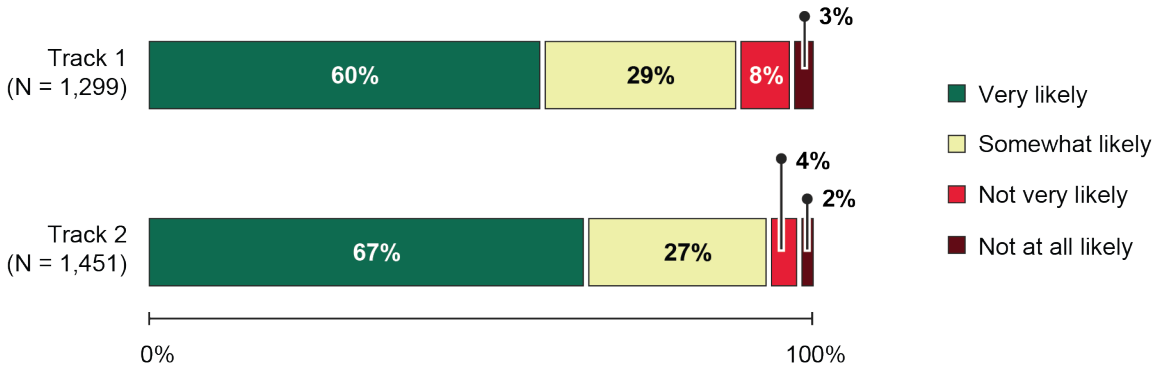
[38] The practice survey instrument can be found in the Chapter 3 Appendix. Although the CPC+ care delivery reporting data focus on practices' capabilities and strategies for delivering primary care, the practice survey focuses on practice operations (such as how many of each type of staff work at the practice, full- or part-time), practices' perspectives about CPC+ (such as, whether they would participate in CPC+ again given what they know now, or how burdensome they viewed various CPC+ reporting requirements), and practices' approaches to primary care delivery.

**CPC+ practices reported they were satisfied with their decision to join CPC+.** In response to the 2018 survey of practices that began participating in CPC+ in 2017, 64 percent of practices reported that, based on their overall experience with CPC+, they were "very likely" to participate in CPC+ again if given the opportunity, and another 28 percent of practices reported they were "somewhat likely" to do so. Track 2 practices gave slightly more favorable ratings (Figure 4.1). The question asked them to take into account the improvements they have made, the requirements they faced, and the supports they received.

**"CPC+ is helping build the system we needed to build anyway… because when you're looking at population health, when you're looking at being completely at risk for the cost of care, having these resources [especially behavioral health staff, care managers, social workers] in the clinic is a necessity."**

***—Health system leader***

**Figure 4.1. Likelihood that practices would participate in CPC+ if they could do it all over again**




Source: Mathematica's analysis of the 2018 CPC+ Practice Survey.

**Just over a year into CPC+, practices already perceived improvements from participating.** In response to the 2018 Practice Survey, most practices (93 percent) reported that CPC+ improved quality of care "somewhat" or "a lot." Deep-dive practices and systems generally said that CPC+ was valuable because they perceived that working on the care delivery functions increased staff and patient satisfaction, improved patient care, and helped them prepare for a shift in focus among payers away from FFS payments and toward population health and value-based payments.

**However, many practices found meeting the CPC+ requirements to be burdensome.** Two-thirds of practices reported on the 2018 Practice Survey that meeting the care delivery requirements was "somewhat" (49 percent) or "very" (17 percent) burdensome, and just over half of practices said that meeting the health IT requirements was "somewhat" (32 percent) or "very" (21 percent) burdensome.

**At deep-dive practices, levels of knowledge about—and support for—CPC+ varied:**

- **Several deep-dive practices reported that staff were supportive of CPC+ despite the increase in workload it may have caused.** Among practices that noted the increased burden of participating in CPC+, many reported that the burden decreased after the initial push to implement new processes and workflows. Some simply said the extra effort was worth the payoff of improved patient care. One practice reported that its practitioners and staff grew even more excited about CPC+ when they saw improvements in quality metrics after a year of participation.

> **"Year one's going to be a struggle. Year two is going to be a little bit of a struggle, but we're going to show so much more improvement… and it's just baby steps and trying to get people less stressed out about, 'Oh my gosh, what does this mean for us, and what do we have to do?'"**
>
> ***—System-level CPC+ leader at a small Track 1 practice***

- **Several other practices reported that practitioners and staff resisted some aspects of CPC+.** Some practice leaders described practitioners and staff as feeling "change fatigue" from practice transformation efforts in general, and others reported that they were confused about CPC+ or overwhelmed by increases in workload and documentation. CPC+ champions from these practices acknowledged that culture change would take time, and a few reported that practitioners and staff had become more engaged as a result of ongoing efforts such as in-person meetings, soliciting feedback and opinions from staff, and involving staff in decision making related to CPC+.

- **Particularly in system-owned practices, several practitioners and staff were not familiar with CPC+.** In some instances, although practitioners and staff were engaged in activities related to the CPC+ requirements, they did not label these activities as part of CPC+. Practitioners and staff were much less familiar with the CPC+ terminology and requirements than were system-level CPC+ coordinators or practice champions.

## 4.5. Practices' overall approach to CPC+

Practices were required to meet track-specific care delivery requirements within each function. They were encouraged to view these care delivery requirements as a minimum, or starting point, to build on as they advance care delivery within each function. Practices had autonomy to decide which care delivery requirements or broader changes within each function to implement first, which staff should be involved, and how to monitor change. To support their work, CMS provided an implementation guide that described each of the functions and care delivery requirements in detail, differentiated requirements for Track 1 versus Track 2 practices, and included links to evidence-based tools, templates, and articles to give practices examples they could model or adapt. CPC+ practices also received ideas, tools, and resources to support their CPC+ work from the CPC+ learning community and each other during ongoing virtual and in-person learning sessions and via a web platform. (Section 3.4 describes the CPC+ learning activities.)

In this section, we provide an overview of how practices are implementing care delivery requirements. First, we describe how deep-dive practices prioritized care delivery changes. Then, we highlight the types of staff involved in CPC+ implementation. Finally, we review the ways in which deep-dive practices approached the implementation of care delivery requirements. In Section 4.6, we provide a detailed function-by-function look at how practices approached each care delivery requirement and the factors that supported or hindered their work.

### 4.5.1. How did CPC+ practices decide how to prioritize their work on practice change in 2017?

In the deep-dive interviews, we explored how practices were approaching the work for each function overall; we found that practices were focused primarily on the care delivery requirements during the first implementation year. This finding is understandable given that practices were ramping up and getting things started in the first year, and they know that their continued participation in CPC+ is dependent on meeting these requirements. Practices may move beyond the requirements to a greater extent in future years.

**Many deep-dive practices first assessed their pre-existing work to decide which areas to focus on in 2017.** Practices indicated that identifying care delivery requirements that they met or came close to meeting *before CPC+* allowed them to focus in on other requirements where they had more room to improve. As an example, most deep-dive practices indicated that they had already met many of the CPC+ requirements related to access and continuity before CPC+ began. In some instances, practices indicated they had focused on a given function—such as care transitions, care management, or population health—as part of prior transformation efforts, but the care delivery requirements were pushing them to deepen their work. Several deep-dive practices focused first on care delivery requirements that were "quick and easy" to achieve, explaining that these "early wins" could build confidence and catalyze staff buy-in for more complex requirements planned for the future.

**Many practices prioritized work on care management (often focusing on risk stratification and hiring and deploying care managers) and comprehensiveness and care coordination (especially integrating behavioral health into primary care) in 2017.** Beyond these two areas, Track 1 practices commonly reported focusing on meeting quality metrics and laying a foundation for practice transformation by setting up workflows, hiring new staff, and developing standardized procedures for documentation and data review to facilitate QI efforts. While Track 2 practices also undertook these same tasks, Track 2 practices also reported focusing on refining work on requirements specific to Track 2, such as increasing the use of collaborative care agreements with specialists and assessing patients' psychosocial needs. Regardless of what practices prioritized, most were working on multiple requirements at once, and many reported that their priorities spanned three or more of the five CPC+ functions.

**Engagement of practitioners and staff in setting the direction of CPC+ work varied for independent and system-owned practices.** Several independent deep-dive practices described engaging practitioners and staff in the prioritization process, usually through regular meetings to review CPC+ goals, requirements, and practice performance. In system-owned, deep-dive practices, CPC+ priorities were typically set at the system level to align efforts across practices. At several system-owned practices, local practitioners and staff acknowledged that, although they were aware of practice efforts to support CPC+, they had not been involved in discussions

about prioritizing CPC+ work, and they had limited awareness of the overall CPC+ goals and priorities. One system's chief medical officer noted that there had been a mixed reaction to this top-down approach in the system: some practitioners were relieved to have system guidance on how to implement particular care delivery requirements for CPC+, while other practitioners preferred greater autonomy. At two other practices, a medical lead and a CPC+ coordinator said that even though their practices were not asked for input, their staff had enthusiastically embraced the changes CPC+ introduced, because they knew the intent was to improve care for their patients.

### 4.5.2. Which types of staff were involved in implementing CPC+?

Many deep-dive practices had appointed a CPC+ coordinator who led CPC+ implementation at deep-dive practices. Among independent practices, the individuals formally responsible for leading day-to-day implementation and championing CPC+ varied and included designated CPC+ coordinators, practitioner leaders, QI leaders, and practice managers. CPC+ coordinators at both independent and system-owned practices met regularly with practitioners and practice staff to educate them and answer questions about CPC+, review care delivery requirements, and provide guidance on implementing CPC+ change tactics. For example, a CPC+ coordinator from a system-owned practice described visiting each CPC+ practice in the system monthly, adding ad hoc visits with practices needing extra support, contacting practices regularly to share CPC+ updates, and managing a SharePoint site to share resources among the practices.

**"We are trying to… educate them on why it's important that they're asked to do X, Y, and Z in their process. Why is X, Y, and Z important down the line, right? What does it tie to? Because I think people will feel better about doing things if they know it matters and why, and that's what we're trying to do, just give people more information and understand the bigger picture and why this is important."**

***—Medical leader at a large, independent Track 1 practice***

**Existing staff have absorbed many of the responsibilities related to implementing CPC+ and improving quality measures at deep-dive practices.** For example, medical assistants took on new responsibilities, such as administering patient health questionnaires or providing fall risk assessments. As such, several deep-dive practices noted the importance of engaging non-practitioner staff in CPC+ goals and helping staff understand how their roles fit into the larger work to improve patient care.

**Most CPC+ practices also used CPC+ funding to hire additional staff, particularly care managers.** On the 2018 CPC+ practice survey, most CPC+ practices that employed care managers reported that their care managers had a clinical background. For example, at 79 percent of Track 2 practices and 73 percent of Track 1 practices, at least one care manager was a registered nurse. About 20 percent of Track 1 and Track 2 practices employed at least one care manager who was a licensed practical nurse, while 27 percent of Track 1 practices and 20 percent of Track 2 practices employed at least one care manager who was a medical assistant. Care managers contributed especially to the two most demanding functions: care management and comprehensiveness and coordination. Deep-dive practices with fully integrated care managers reported that the role allowed them to serve more of patients' complex care needs,

including monitoring chronic conditions, providing education, coordinating with outside providers, and accessing social supports in the community.

### 4.5.3. How are CPC+ practices approaching implementation?

**In addition to prioritizing CPC+ work, systems often standardized practices' approaches to care delivery requirements.** Many systems adopted a standardized approach to CPC+ implementation across their practices, which helped ensure consistency in care delivery. These systems often established standardized processes for QI, eCQM reporting, risk stratification, and care management to support CPC+ implementation across their practices, and several system leaders also reported extending standardized processes for CPC+ to non-CPC+ practices in their system. While system leaders noted that their practices had some flexibility to customize elements of CPC+ implementation, leaders at system practices often wished for more autonomy at their practice site to change some aspects of care. In contrast, independent practices often had greater autonomy than system-owned practices to make CPC+-related changes tailored to their local population, such as selecting their own risk-stratification methods, designing care plans specific to their patients, and relying more on clinical judgment and patient preferences for specialist referrals.

**Despite the fact that requirements for Track 2 practices were more advanced than for Track 1 practices, we saw relatively few differences in implementation progress by track in the first year of CPC+.** During the first year of CPC+, many practices prioritized work on care management (often focusing on risk stratification and hiring and deploying care managers) and comprehensiveness and care coordination (especially integrating behavioral health into primary care). Beyond these two areas, Track 1 practices commonly reported focusing on meeting quality metrics and laying a foundation for practice transformation by setting up workflows, hiring new staff, and developing standardized procedures for documentation and data review to facilitate QI efforts. While Track 2 practices also undertook these same tasks, Track 2 practices also reported focusing on refining work on requirements specific to Track 2, such as increasing the use of collaborative care agreements with specialists and assessing patients' psychosocial needs. Most practices were working on multiple functions at once.

## 4.6. Practices' work on CPC+ functions and care delivery requirements

This section describes how practices were approaching CPC+ and transforming care in each function. As we found in CPC Classic, practices initially tended to focus on the care delivery requirements, in part because they know that their continued participation in CPC+ is dependent on meeting these requirements. For each CPC+ function, in the sections that follow, we describe CPC+ requirements for 2017, practices' progress toward those requirements and, if relevant, other changes practices made to improve care delivery that were not required in 2017. We also highlight the factors that supported or hindered their work.

### 4.6.1. Function 1: Access and continuity

CPC+ encourages practices to improve patients' access to, and continuity of, primary care. CPC+ defines access to care as the timely use of needed care, and continuity of care as a continuous relationship between a patient and a team of professionals who provide longitudinal care (CMMI 2017). Access to comprehensive primary care is expected to promote health and the adoption of healthy behaviors that can help patients prevent and manage disease (ODPHP n.d.). Access to a regular source of primary care also can prevent unnecessary and costly care, such as avoidable ED visits.

For the CPC+ function of access and continuity, CMS required practices to meet care delivery requirements related to empaneling patients (Section A); organizing care into teams to optimize continuity (Section B); ensuring timely access to care (Section C); and for Track 2 practices, providing alternative care delivery approaches to traditional office visits (Section D).

#### A. Empaneling patients to a practitioner and/or care team

**What are the CPC+ requirements?**

In 2017, CMS required practices to achieve and maintain at least 95 percent empanelment to a practitioner and/or care team. For CPC+, CMS defined "empanelment" as assigning each patient to a particular practitioner and/or care team in a way that considers both patient and caregiver preferences. Participating practices were required to include in patient panels only "active patients"—those who had been seen at the practice within some practice-defined lookback period, usually the past 18 to 36 months.

**How are CPC+ practices approaching empanelment?**

**All CPC+ practices are empaneling patients, and most are empaneling their patients to a practitioner rather than a care team.** In 2017, nearly 90 percent of practices had empaneled at least 95 percent of their active patients. Care delivery requirement reporting data indicated that 88 percent of all practices empanel patients to a practitioner, and the rest empanel patients to a care team. Among the deep-dive practices interviewed, many said they had empaneled patients before joining CPC+, and a couple reported that they formalized earlier efforts to empanel patients after joining CPC+.

> **"We had thought about empanelment before, but joining CPC+ really prompted this work. Empanelment is important at so many levels: Who knows the patient best? Who will interpret this lab or look at correspondence from a specialist? I really see the utility of it."**
>
> ***—Medical lead at a large, independent Track 1 practice***

**For assigning patients to practitioners, deep-dive practices typically considered patients' preferences and which practitioners they had previously seen.** Several practices used a more complex assignment logic that considered several factors, including patient preference. For example, at one deep-dive practice, a physician assistant said that practitioner assignment was based on the patient's preference for a particular practitioner, the type and complexity of patient need, and which practitioner the patient had seen in the past, in roughly

that order. Several practices also mentioned using practitioner expertise as a criterion, such as assigning patients with certain chronic conditions to practitioners who typically provide care for those conditions. Finally, several practices mentioned that they prioritize assigning patients to practitioners with fewer patients.

### What facilitators and/or challenges do CPC+ practices experience when empaneling patients?

**Most deep-dive practices described using EHRs to support empanelment, which in turn supported QI efforts.** Respondents indicated that practitioner assignments were visible in their EHR and remarked that EHR reporting functions were helpful for improving the accuracy of empanelment. A few practices also said that running EHR reports or using other data sources such as patient charts helped them identify gaps in care that led to panel updates. For example, the medical lead at a Track 2 practice explained that the practice reviewed EHR reports by panel often to check whether patients needed medication reviews or follow-up on blood pressure concerns. Checking for these gaps in care, in turn, facilitated panel updates, because sometimes when the practice followed up with patients who had gaps, they learned that the patients had moved to another practice or needed to be removed from the panel for other reasons. A couple of practices described working with EHR vendors to improve empanelment processes. For example, a system-level health IT specialist noted that their vendor helped the health system create a prompt that flags patients without an assigned practitioner.

#### Health IT insights: Understanding empanelment functionality

Aligned with our finding that most deep-dive practices reported using health IT to support empanelment in 2017, our interviews with 13 health IT vendors working with CPC+ practices found that most vendors' products had functionality to support empanelment prior to CPC+. All vendors offering empanelment functionality reported that their products supported practitioner-level empanelment, with several vendors indicating that their products could automatically empanel patients at this level. To do so, their products commonly drew on data practices entered into their EHR during routine visit documentation. Larger health IT vendors (those working with 100 or more CPC+ practices) reported that practices could also use their products to empanel patients to care teams. Vendors indicated that this process was not currently automated, because the following factors made it more complex than assigning patients to practitioners: practices organize care teams in different ways, practitioners could be part of multiple care teams, and the composition of care teams can change over time.

**Barriers to empanelment that deep-dive practices reported included errors in the assigned practitioner listed in the EHR and lack of practitioner availability.** Several deep-dive practices noted problems maintaining accurate empanelment records in the EHR. Sometimes there were assignment errors in the EHR, such as listing the most recent practitioner seen as the empaneled provider, rather than the correct practitioner, or counting inactive patients as part of a practitioner's panel. At a few practices, practitioner turnover presented empanelment challenges, as it was time-consuming to work with a large number of patients on selecting a new practitioner when a practitioner left a practice. At a few other practices, practitioner availability

posed challenges to meeting patients' assignment requests; for example, a few practitioners did not have room in their panels for new patients.

## B. Using care teams to support continuity of care

### What are the CPC+ requirements?

To promote continuity of care, CMS required practices to organize care by practice-identified teams that are responsible for a specific group of patients.[39] In 2017, practices were expected to ensure that all practitioners and care team staff could access the same patient information in the EHR, in real time, to guide patient care. Finally, practices were encouraged to develop the capacity to measure and analyze continuity for their active empaneled patients.

### How are CPC+ practices organizing care teams and tracking continuity of care?

**Most practices reported that their care teams included physicians and medical assistants; inclusion of other staff types varied.** As part of 2017 care delivery reporting requirements, CMS asked practices to indicate the member roles found on a typical care team. Ninety-eight percent of practices reported that their care team included a physician, 84 percent said it included a medical assistant, and 74 percent said it included administrative staff. About half of practices reported that their typical care team included a care manager (56 percent) or nurse practitioner (46 percent). Less commonly, care teams included a registered nurse or licensed practical nurse (37 and 36 percent, respectively) and/or a physician assistant (23 percent). Compared with Track 1 practices, Track 2 practices were more likely to have care managers (67 versus 44 percent), behavioral health specialists (20 versus 11 percent), and pharmacists (19 versus 10 percent) on their typical care team.

**"It's been good to include the care manager on the care team, because the patients get more of a personal touch. They know who their care manager is and what to expect from that person. You have to build that rapport between you and the patient, not just with the doctor and patient…Then, if [the patient] is in the hospital or something, and I call to follow up to say, we're concerned about you right now, they already know me."**

***—Care manager at a small, system-owned Track 2 practice***

Reported variation in care team composition may represent both actual differences in how care teams are structured and differences in practices' understanding of the term "care team." In deep-dive interviews, we found that "care team" was not a term commonly used at many practices, and many respondents were unsure what site visitors meant by it. This lack of understanding may partially explain why 95 percent of practices reported they have care managers on staff, but only half of practices reported that care managers were part of their care teams. For some practices, it reflects that care managers often worked separately from the care

[39] The definition of continuity of care in the CPC+ 2017 Implementation Guide includes informational continuity (team members having access to a patient's information), longitudinal continuity (an ongoing relationship with the same practice over time), and relational continuity (ongoing therapeutic relationship between a patient and practitioner and/or care team) (pages 16–17 of the Implementation Guide).

team. For example, care managers often "worked the phones," focusing on the list of patients who needed calls for longitudinal and episodic care management support.

**Several deep-dive practices reported that teams worked best when medical assistants were trained to cover for one another as well as for front-desk staff.** At one practice, medical assistants who had separate duties on a given day (such as staffing the incoming call line or bringing patients from the waiting room to the exam room and taking their vital signs) alternated their roles weekly, so they knew each role well and retained their skills and interest in the work. Other practices reported that they trained medical assistants to cover for the front-desk staff. A couple of practices reported that, even when medical assistants were assigned to specific practitioners or tasks, they often stepped in to help when a colleague was overwhelmed. Similarly, a few deep-dive practices described using a fluid care team model, in which a practitioner consistently led a team, but the other members (usually including medical assistants and sometimes including nurses, nurse practitioners, physician assistants, or care managers) worked on and across multiple care teams at the practice. This fluidity may help to explain reported variation in care team composition.

**Seventy-seven percent of CPC+ practices reported tracking continuity of care, and most of them used the EHR to do so.** Among these practices, care delivery requirement reporting data show that the typical practice used EHR systems to track continuity of care (86 percent). Practices also reported using practice management systems (35 percent) and/or "other" systems (12 percent) to track continuity of care, sometimes in combination with their EHR.

### What facilitators and/or challenges do CPC+ practices experience when organizing care teams to optimize continuity of care?

**Practices pointed to practice culture and CPC+ resources as supporting continuity of care.** Several deep-dive practices said their pre-existing practice culture facilitated continuity of care, noting that good working relationships among practice staff encouraged open communication about patients' needs. A few practices said that being able to use CPC+ resources to bring on new staff had enhanced continuity and care team functioning at their practices. For example, one practice manager noted that the new care manager and health coach "…are able to reach out deeper with patients than practitioners can … in a 15-minute visit."

**"[Care teams] opened up the doors for communication, and I saw that we were able to provide better patient care, better continuity, and then I also saw the other side of it, which was employee satisfaction."**

***—Medical assistant at a large, system-owned Track 2 practice***

**Several deep-dive practices described ways in which EHRs supported continuity of care.** For example, some practitioners noted that EHRs:

- Allowed patient information to be documented in one searchable record, which supports informational continuity[40]

[40] Starfield (1998) discusses the concept of informational continuity.

- Allowed for messaging among care team members, which supports keeping team members up-to-date
- Incorporated information about care delivered outside the practice setting, such as a hospital visit
- Made it easier for practitioners to remind themselves about issues to follow up on when preparing for the next visit

## C. Ensuring timely access to the care team through 24/7 coverage and other strategies

### What are the CPC+ requirements?

In 2017, CMS required practices to provide patients with access to a care team practitioner who has real-time access to the patients' EHR 24 hours a day, 7 days a week. CMS also required Track 2 practices to offer alternatives to traditional office visits, such as eVisits, phone visits, home or group visits, and/or to offer expanded office hours (discussed in the next section).

### How are CPC+ practices approaching 24/7 coverage and other access-enhancing strategies?

**Virtually all CPC+ practices reported that they provided 24/7 coverage with real-time access to their EHR; deep-dive practices said this type of access pre-dated CPC+.** In 2017, practices used a variety of strategies to expand access to care (Figure 4.2). Care delivery reporting data indicate that:

**"The fact that there is 24/7 communication is comforting to the patients. They know they have somewhere they can go for advice. Patients previously told us that leaving a voicemail was not satisfying; they wanted an answer right away."**

***—Medical assistant at a medium-size, system-owned Track 1 practice***

- Most practices "always" provided **advice to patients by phone during and after hours** (87 and 83 percent, respectively). Among deep-dive practices, practitioners said they typically shared responsibility for taking after-hours calls on a rotating basis, although at a few practices, some practitioners took all of the calls for their empaneled patients each evening.
- Many practices always offered patients **same- or next-day appointments** (78 percent). Deep-dive practices reported different approaches to offering same-day visits, including holding appointment times open each day for acute needs, assigning particular practitioners to walk-in visits, and instituting flexible hours to accommodate patients with acute needs. Several deep-dive practices emphasized that they see this tactic as an important aspect of access to care, especially for patients with acute needs. However, a few practices reported a tension between maintaining continuity with assigned practitioners and providing same-day appointments. Deep-dive practices reported using various strategies to manage this tension, including offering same-day appointments for all practitioners, explaining to patients that practitioners see one another's patients for acute-care visits, and ensuring communication within

**"I tell my patients, when you are sick, just communicate with my staff that you're sick and you need to be seen. I jump through amazing hoops to make certain that you're seen—stay late, come early, skip lunch."**

***—Solo practitioner at an independent Track 1 practice***

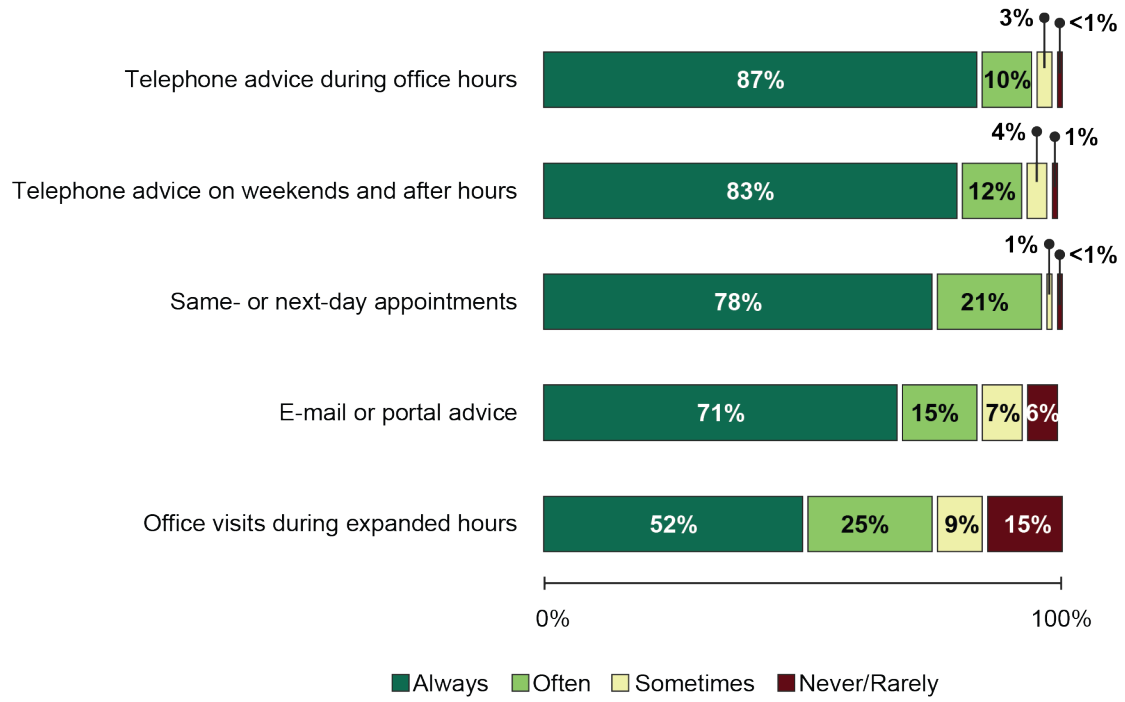
the practice when practitioners see one another's patients, often through in-person discussion and/or EHR notes.

- Many practices always provide **email access** or an **online patient portal** (71 percent). Several deep-dive practices noted that their portal contributed to patient access and practice efficiency.
- About half of practices always offered **expanded office hours** on weekends, evenings, or early mornings (52 percent). Among deep-dive practices that reported offering expanded hours, the expanded visit times varied widely. For example, several deep-dive practices reported opening at 7:30 a.m. one day per week, whereas others offered evening hours until 8:00 p.m. several days per week plus regular Saturday hours. Several practices of various sizes that offered expanded hours said that insufficient staff (at all levels) and/or financial resources posed a challenge to maintaining or further expanding those hours.

**"We used to call patients when any lab results came in. Now we put it in the portal, and we get an alert if they have not looked at it within a day, and if so, we call them. But usually, because the patients get a notice when results come in, they go in there and look at their results, rather than waiting for us to call them."**

***—Medical assistant at a medium-size, system-owned Track 2 practice***

**Figure 4.2. Percentage of CPC+ practices reporting that they offered certain access options to patients, by frequency**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017. We combined the "Never" and "Rarely" categories in this figure. In most cases, the percentages for these categories were small (< 5%).

**Closer look: How do patients' questions reach CPC+ practitioners after hours?**

Care delivery reporting data indicate that practices use three approaches for fielding and triaging questions from patients after hours:

1. **Direct calls to practice members.** According to care delivery reporting data, in 82 percent of practices, a clinician or care team member from the practice provided after-hours care. Several deep-dive practices indicated that they used a triage approach, where a nurse or resident answered the call line and used his or her clinical judgment to give patients advice or escalate concerns to the on-call practitioners, as needed.
2. **Centralized call center.** Twelve percent of practices reported using a centralized call center. Deep-dive practices using this approach indicated that staff at the call center contacted the on-call practitioners with the name and phone number of patients who called the center.
3. **Formal arrangement with another organization.** A small percentage of practices (5 percent) reported this type of arrangement. Practitioners from several deep-dive practices reported that they shared a call line with other practices, sometimes those owned by the same system. Although practitioners staffing these shared after-hours call lines had access to the patient's EHR, patients might not always reach a familiar practitioner from their practice for advice.

## What facilitators and/or challenges do CPC+ practices experience when providing 24/7 coverage and other access enhancements?

**Deep-dive practices said that health IT supported 24/7 access; most practitioners reported that they could easily and securely view patients' records from their home computers and often from their smartphones.** In addition to enabling practitioners to provide medical advice, one practitioner noted that real-time EHR access also helped reduce errors: "Otherwise, I would have been talking to the patient on the phone, writing it on paper, coming back and documenting it later; [but] once you leave [that conversation], the likelihood of documenting it at all or correctly goes down by 50 percent."

**Practices reported some challenges related to patients misusing the after-hours line and practitioners documenting care delivered while on-call.** For example, despite practices' efforts to educate patients about the availability of an after-hours access number, some patients remained unaware of it or used it inappropriately, such as calling to request narcotics. A few practitioners reported concerns with the processes for documenting the information obtained during after-hours calls at their practices. For example, one practitioner said the answering service they use verbally relays patient problems to practitioners but does not have access to the EHR and does not document issues in writing. This finding raised a concern that important information shared by the patient might be lost by the time the message is relayed to the practitioner.

## D. Providing alternatives to traditional office visits

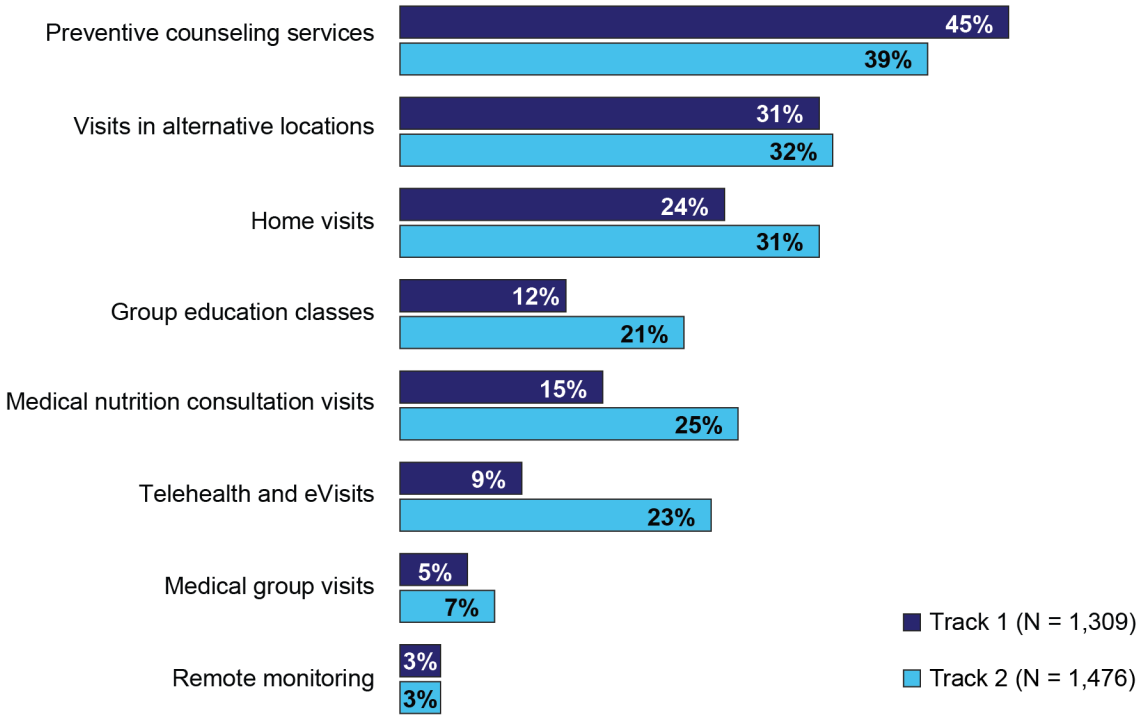
### What are the requirements?

For 2017, Track 2 practices were also required to regularly offer at least one alternative to traditional office visits and/or expanded hours. Alternatives to traditional office visits could include eVisits, phone visits, group visits, home visits, or alternative location visits.

### How are CPC+ practices approaching alternative visits?

**Although it was a requirement only for Track 2 practices, most practices in both tracks offered at least one type of alternative visit.** Care delivery requirement reporting data show that 86 percent of Track 1 and 92 percent of Track 2 practices offered at least one type of alternative visit. The most common types of alternative visits offered were preventive counseling services (examples given in the CPC+ Implementation Guide include reimbursable visits to counsel patients on obesity, alcohol misuse, or tobacco cessation); visits in an alternative location (other than the home), such as a nursing home or hospital; and home visits (Figure 4.3). Track 2 practices were more likely than Track 1 practices to offer group education classes, medical nutrition counseling, and telehealth and eVisits.

**Figure 4.3. Percentages of Track 1 and 2 practices offering at least one type of alternative visit, by visit type**




Source: Mathematica's analysis of 2017 (Q3 and Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the third and fourth quarters of 2017. Some practices had no reported alternative visits in the last two quarters. We removed these practices before calculating percentages with at least one visit, because we could not distinguish between true zeros and missing values. We recoded visit counts of 9999 or 9999999999 as missing. Examples of preventive counseling services given in the CPC+ Implementation Guide include reimbursable visits to counsel patients on obesity, alcohol misuse, or tobacco cessation.

**Among deep-dive practices that offered alternative visits, home visits were the most common type.** A few deep-dive practices reported offering visits at other locations such as nursing homes, either along with home visits or as the only type of alternative visit, and a few other practices offered eVisits (electronic or virtual visits) and phone visits. A few additional practices reported that they occasionally offer home visits. For example, a solo practitioner described visiting a homebound patient during a blizzard, and a physician at another practice said the practice makes occasional house calls for terminally ill patients. Of the deep-dive practices that regularly offered one or more type of alternative visit, most reported that they had implemented this tactic prior to CPC+. No deep-dive practices reported offering group visits.

### What facilitators and/or challenges do CPC+ practices experience when providing alternative visits?

**A few practices described the value of alternative visits for patient care.** For example, practitioners remarked that home visits help them learn about their patients. One physician explained that home visits can help prevent readmissions, noting that it can be very challenging for sick patients to visit the practice to access care and become stabilized. At one large, system-owned Track 2 practice, the system had required the practice to offer eVisits for a few years prior to CPC+. To access these eVisits, patients visit the online patient portal, which lists conditions for which they can request an eVisit; the medical lead noted that these conditions all relate to minor and common outpatient concerns, such as a urinary tract infections, respiratory or sinus issues, or minor burns. When the patient submits an eVisit request, the practice manager receives an email that the system forwards to a practitioner, and that practitioner is expected to respond within four hours. The medical lead, practice manager, and two medical assistants each described eVisits as a relatively easy process for patients and practitioners alike at their practice, although the practice manager noted that the practice does not receive many eVisit requests. A medical assistant at a different deep-dive practice described eVisits as valuable, because they are convenient for patients and promote access without requiring office visits. A couple of practices reported that CPC+ funding supported implementation or expansion of alternative visit types.

> **"I'd like for e-visits to pick up, personally, because I think it's a good convenience for the patient. If the patient doesn't want to miss work, or the patient is a stay-at-home mom and has a four-year-old and a two-year-old and doesn't want to bring them in, she can send that info and then pick up the prescription in a few hours at her local pharmacy."**
>
> ***—Physician at a large, system-owned Track 2 practice***

**Several deep-dive practices described difficulties meeting and/or understanding payers' requirements about billing for alternative visits, and a few discussed challenges requiring payment for communications that patients are accustomed to receiving at no cost.** Deep-dive practices expressed particular frustration with some payers' requirements for group visits.[41] For example, a physician from one deep-dive practice expressed disappointment that, according to his understanding, some payers do not allow practices to bill for group visits that provide patient education, which would be helpful for diabetes patients. This physician commented, "Group visits I think are a great idea, but we're not going to stand on our heads and try to meet the definition if it's not something that works for us or our patients." Regarding patient billing, one physician described the experience of billing a patient for a phone visit as "almost dirty," explaining, "If you have a question, and it's a sincere one, and I can answer it, I'll answer it. I don't want to nickel and dime you for that." Similarly, respondents at practices that offer a patient portal noted that patients are accustomed to sending portal messages at no cost (they cannot be billed) and are therefore unlikely to be willing to pay for eVisits (which have a more formal online structure and can be billed).

**Closer look: Billing for alternative visits**

Medicare further shifting fee-for-service (FFS) payments for services away from traditional FFS and toward prospective payments in later years of CPC+ may mitigate Track 2 practices' concerns regarding billing for alternative visits. (See Chapter 3 for a description of CMS' prospective payment methodology.)

**Practices expressed concerns about ensuring quality in an eVisit or phone visit**. Practitioners at a few practices explained that they would rather see patients in person than provide eVisits or phone visits, either because they see a potential for overuse of remote visits or because they feel that the quality of care is higher when patients are seen in person. As one physician said, "The thing I don't like about the electronic visits is you don't lay hands on the patients. You're not listening to the lung, you're not listening to the heart."

### 4.6.2. Function 2: Care management

CMS sees care management for high-risk, high-need patients as a hallmark of comprehensive primary care. The term "care management" describes a set of proactive activities to improve health outcomes and reduce overutilization, harm, and waste (CMMI 2017). For CPC+, CMS asked practices to use risk stratification to identify patients who may benefit from care management (Section A) and to offer longitudinal care management that provides ongoing and proactive support to the highest risk patients, such as those with multiple chronic conditions (Section B). Such support includes the use of care plans that document and track patient needs and how they are addressed (Section C). CMS also required practices to offer short-term or episodic care management to patients experiencing

[41] Chapter 3 provides more detail on practice experiences using enhanced and alternative payments available through CPC+ to expand alternative visits.

an acute event, such as an ED visit or a hospitalization (Section D). We detail the requirements of each of these activities below and discuss how practices addressed them.

## A. Risk stratification

### What are the requirements?

CPC+ required each practice to risk stratify its entire patient population in 2017. Risk stratification involves assigning a risk status (or risk score) to all empaneled patients, which allows practices to strategically address the needs of patients at different risk levels. Track 2 practices were also required to use a two-step risk-stratification process.[42] The first step involved assigning a risk score to patients based on an algorithm incorporating defined diagnoses, claims, or other data. The second step involved adjusting the risk score based on the care team's knowledge of the patient (such as whether the patient lives with a caregiver or has behavioral health conditions), referred to as "clinical intuition."

### How are practices approaching risk stratification?

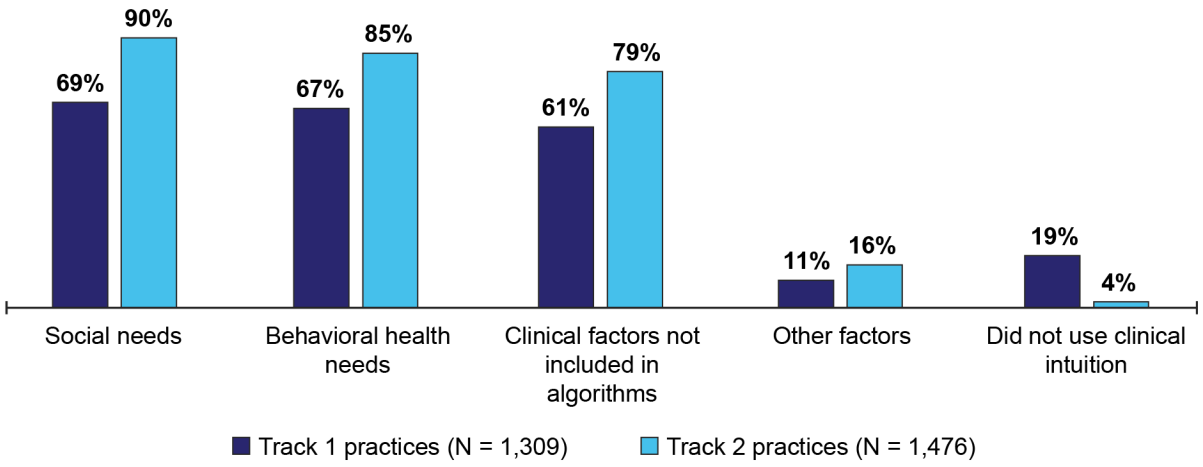
**Almost all practices (97 percent) reported that they used a data-driven algorithm as part of their risk-stratification approach**. When reporting their progress on CPC+ care delivery requirements, practices identified the data sources and algorithms that they used to risk stratify patients: 61 percent of practices reported using clinical variables from their EHR, 27 percent used a published clinical algorithm such as the American Academy of Family Physicians (AAFP) risk tool, 18 percent (more often SSP practices) used an algorithm based on variables constructed from claims, and 27 percent used another type of data-driven algorithm. In a few independent deep-dive practices, practitioners used their knowledge of the patient or an informal algorithm to assign risk scores, instead of a data-driven algorithm.

**Even though only Track 2 practices were required to use a two-step risk stratification process, more than three-quarters of Track 1 practices and 95 percent of Track 2 practices reported doing so**. Social needs were the most common "other factors" practices considered when using "care team/clinical intuition" to risk stratify their patients (Figure 4.4). In many deep-dive, system-owned practices from both tracks, an EHR algorithm automatically assigned risk scores that members of the practice care team adjusted (or planned to start adjusting soon) using clinical intuition. In a few of these practices, any member of the care team could adjust risk scores based on his or her knowledge of the patient; however, in a few other practices, practitioners were solely responsible for adjusting risk scores. A few deep-dive practices used risk-stratification criteria that included clinical intuition but not as a distinct second step in assigning risk scores. For example, practices described using the AAFP risk-stratified care management categories, which incorporate the care team's knowledge of the patient.

[42] The two-step risk-stratification process became a requirement for Track 1 practices in 2018.

**Although the care delivery requirement reporting data indicate high use of risk stratification, at the time of the site visits, many deep-dive practices had not implemented workflows to support risk stratification.** Most of these practices were system-owned or part of medical groups that developed risk-stratification processes centrally. Although system staff had a clear vision of risk stratification and the related clinical workflows, they had not yet rolled out risk stratification to all practices. In other cases, system staff and practice staff had different expectations of risk stratification; for example, some practice staff did not think risk scores (such as a numeric score generated at the system level using an algorithm built into the EHR) were useful or were not adjusting risk scores using their clinical intuition. In general, these practices were not using risk scores to identify and address patient needs.

### Figure 4.4. Factors that CPC+ practices consider when using clinical intuition to risk stratify patients, by track




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

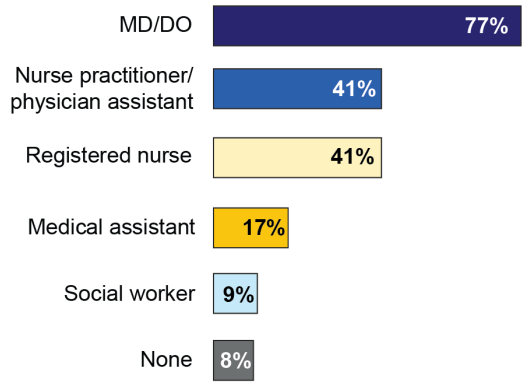
Notes: Based on 2,785 practices that submitted data for the fourth quarter of 2017. Practices could select all responses that applied.

All practices must identify and prioritize a methodology to risk stratify all empaneled patients. Track 2 practices must further use a two-step risk-stratification process: (1) base risk stratification on defined diagnoses, claims, or another algorithm (not care team intuition), and (2) add the care team's perception of risk (care team/clinical intuition) to adjust the risk stratification of patients, as needed.

Clinical intuition/care team perception is a practitioner's and/or care team's knowledge of a patient and a global assessment of the patient's risk, which may include clinical, social, and behavioral risk. It is the second step in the risk-stratification process required of Track 2 practices.

**Assessing and updating risk stratification typically involved collaboration among members of the care team, supported by tools such as EHR algorithms, clinical judgment, and ongoing knowledge of the patient through the patient–practitioner relationship.** Most commonly, practices reported as part of their CPC+ care delivery requirements that physicians were involved in assessing and updating patient risk status (77 percent), followed by nurse practitioners/physicians assistants and registered nurses (41 percent each) (Figure 4.5). In most of the deep-dive practices, a care manager was also responsible for adjusting risk scores in collaboration with a practitioner. (Care managers were not included as a response category for the CPC+ care delivery requirement reporting item on staff responsible for assessing patient risk status.) Deep-dive practices reported that the care manager and practitioner either worked together to adjust risk scores, or the practitioner reviewed and approved the care manager's adjusted risk scores.

**Figure 4.5. Type of staff named as responsible for assessing and reassessing patient risk status at CPC+ practices**




Source: Matematica's analysis of 2017 (Q1) Care Delivery Requirement reporting data from the CPC+ Practice Portal.

Note: Based on 2,786 practices that submitted data for the first quarter of 2017. Practices were asked to limit their reporting of data to the staff at their practice who spend the most amount of time on these activities, even if these activities are not among the staff's primary duties. For example, if medical doctors at the practice usually assessed and reassessed risk status, but a registered nurse sometimes made these assessments, the medical doctor is the person primarily responsible for this activity. If a medical doctor and a registered nurse equally split the coordination, then practices were instructed to select both. Practices could select all responses that applied.

MD/DO = medical doctor/doctor of osteopathic medicine.

### What facilitators and/or challenges do CPC+ practices experience when working on risk stratification?

**Several deep-dive practices described challenges with developing a systematic and accurate risk-stratification process.** Practices struggled to define clear clinical criteria for categorizing patients into distinct and accurate risk levels (for example, high risk versus rising risk); to incorporate necessary data sources, such as hospital and ED information; and to identify an algorithm for risk stratification that was a good fit for the practice. A few practices reported each of these challenges.

**Because they lacked the EHR functionality to automate risk stratification, several deep-dive practices manually calculated and entered risk scores into EHRs.** These practices reported this shortcoming as their biggest challenge with risk stratification. A few of these practices used EHRs to generate information needed to assign risk scores, such as lists of patients by diagnosis, but they calculated the risk scores outside of the EHR and then manually entered the risk scores into the EHR.

**Health IT insights: Lack of industry standards for risk stratification**

Several of the 13 vendors we interviewed indicated that they had not developed an automated risk-stratification functionality, because there are not clear clinical criteria for categorizing patients into risk levels, and practices have different preferred risk-stratification algorithms.

**In a few deep-dive practices, practitioners and nursing staff reported that knowing patients enhanced their ability to apply clinical intuition to risk scores and to integrate psychosocial considerations into risk scores.** Clinicians reported that when they had trusting and open relationships with their patients, they felt more confident about using their clinical intuition in determining how patients' life circumstances might affect their levels of risk.[43] Practices with clinicians who did not know their patients as well faced challenges determining patients' psychosocial issues and how these factors may affect risk. A few practices that reported challenges with risk stratification resulting from limited knowledge of patients' psychosocial issues were trying to improve documentation of these issues in the EHR and communication within the practice about these issues.

**"I don't treat numbers, I treat people… [You look] at the problem list, you look at the med list, and you look at the person—and that's how you risk stratify in medicine. Because that [risk score] is not valuable when the person's sitting directly in front of you."**

***—Practitioner at a medium-size, system-owned Track 2 practice***

**Deep-dive practices had mixed perceptions of the benefits of using risk scores to identify high-risk patients.** Most practices that found risk stratification helpful used risk scores to alert staff when high-risk patients contact the practice, for prioritization or to schedule them for longer visits. Practitioners in several of these practices reported that risk scores were helpful for tracking patients with higher levels of need, helping patients manage their conditions, and keeping these patients from falling through the cracks, particularly by establishing longitudinal care management services when warranted. On the other hand, practitioners in several other practices did not perceive risk stratification as helpful. To these practitioners, risk

**"[The risk score] is a visual reminder that the care managers are here to help these patients with the higher risk scores. It kind of gives us an actual number, rather than 'OK, I think that because of their COPD, or because of whatever, they could use some additional help.'"**

***—Practitioner at a large, system-owned Track 2 practice***

[43] In this section, we use the CPC+ definition of "clinician"—a general term that includes any patient-facing clinical role (for example, a physician, nurse, or social worker trained in care management functions). We use "practitioner" when referring to physicians and other advanced clinicians. Because this section focuses on care management, an area in which multiple team members with clinical roles interface with patients, we used the less specific term "clinician" where appropriate.

stratification provides no benefit, because they know their patients well and pay attention to patients' needs when preparing for an appointment.

## B. Longitudinal care management

### What are the requirements?

In 2017, all CPC+ practices were expected to provide targeted, proactive, relationship-based (longitudinal) care management to all patients identified as increased risk, based on a defined risk-stratification process, and who are likely to benefit from intensive care management. Longitudinal care management aims to manage the care of patients at higher risk of adverse health outcomes, to improve their quality of life, and to lower costs of care.

### How are practices approaching longitudinal care management?

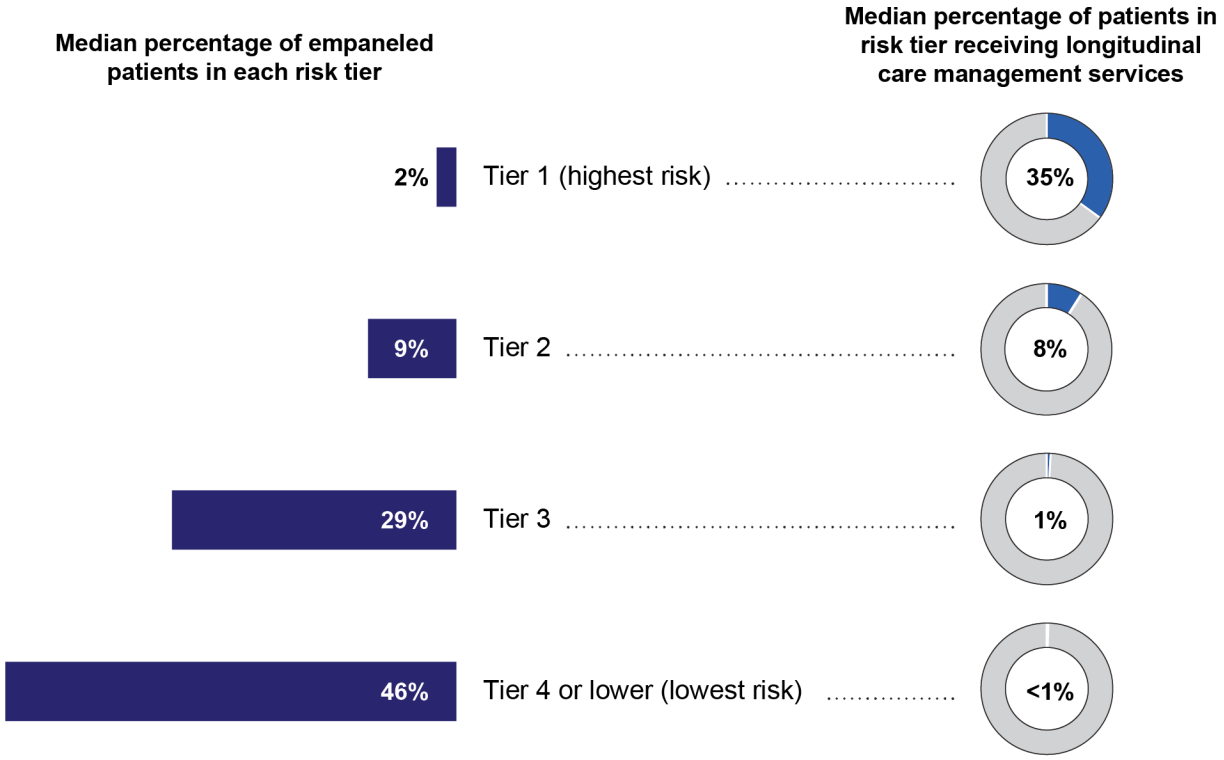
**Most deep-dive practices had care managers, but not all high-risk patients were receiving longitudinal care management by the end of 2017.** For many Track 1 deep-dive practices and several Track 2 deep-dive practices, care managers were newly hired for CPC+ and were not yet providing longitudinal care management to all patients identified as high risk. Many practices in this situation indicated that full integration of new care managers and increased provision of longitudinal care management services to high-risk patients was a primary goal for 2018. Several other deep-dive practices (mostly Track 2 and CPC Classic participants, both system-owned and independent) had care managers in place prior to CPC+. Only a few Track 1 deep-dive practices, including both system-owned and independent practices, reported having no dedicated care managers. In these practices, other staff (such as medical assistants or office managers) assumed care management duties in addition to their other work.

**Deep-dive practices' estimates of care manager caseloads and proportions of patients receiving longitudinal care management services varied widely.** In many cases, practices were unsure of care managers' typical caseloads or approximate percentages of patients receiving longitudinal care management services. Of the several practices providing estimates, care manager caseload estimates ranged widely (from 36 to 300 patients per care manager), with the most typical response being approximately 100 patients per care manager. In several practices, care managers noted that their caseloads included patients requiring higher intensity services (for example, multiple calls per week) as well as patients with less urgent needs (for example, once-a-month check-ins).

**Typically, deep-dive practices reported that care managers providing longitudinal care management focused on high- and rising-risk patients with complex medical (and often behavioral health and/or social) needs.** In many cases, practices noted that patients' psychosocial needs—such as inadequate housing, food insecurity, or lack of transportation—were just as significant as their medical needs. CPC+ care delivery reporting data indicate that although few patients are classified in the highest risk tiers, these patients account for the largest share of longitudinal care management services. The median percentage of empaneled patients in each risk tier were as follows: 2 percent in the highest risk tier (which we refer to here as Tier 1), 9 percent in Tier 2, 29 percent in Tier 3, and 46 percent in Tier 4 or a lower risk tier (Figure 4.6). The median percentage of patients under longitudinal care management in each risk tier were 35 percent of patients in Tier 1, 8 percent of patients in Tier 2, and 1 percent or fewer patients in

other (lower) risk tiers.[44,45] A few deep-dive practices indicated that they limited provision of longitudinal care management services to patients with specific conditions, such as diabetes or high blood pressure. In addition to using risk tiers to identify patients for care management, deep-dive practices indicated that practitioners and other clinicians could also refer patients for care management.

**Figure 4.6. Median percentage of patients by risk tier, and median percentage of patients in each tier who received longitudinal care management in 2017**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Practices defined the number and criteria for as many as 10 risk tiers used in risk stratification. For the purposes of understanding this figure and the text, we use the term "Tier 1" to refer to the highest-risk tier. We provide the median number of empaneled patients and the percentage receiving care management services that practices reported for Tiers 1–3 here, and for combined Tiers 4–10.

[44] In the care delivery reporting data, Tier 1 refers to the highest risk category. CMS and other payers may use a different approach to ordering the risk tiers for payment purposes (that is, "Tier 1" may be used to refer to the lowest risk category). See Chapter 3 for more information.

[45] Care delivery requirement reporting data on longitudinal care management were not adjusted for practice size or other practice characteristics and thus should be interpreted with caution.

**Deep-dive practices reported fairly consistent approaches to delivering longitudinal care management services.** Among practices that were providing these services, care managers typically reached out by phone or in person (if the patient was present for an appointment) to discuss the patient's conditions; to identify recent changes in health status, medications, lifestyle, and behavior choices that affect the patient's conditions; and to establish and track self-management goals. In many cases, practices reported integrating assessments of patients' psychosocial needs into longitudinal care management discussions, and several added that this work was new as a result of CPC+ participation. In addition, many practices said care managers identified resources to help patients, such as specialists, behavioral health providers, and social services (such as groups that could help patients with transportation needs or housing concerns). In a few cases, practices reported that care managers also conducted home visits as needed to assess the home environment and identify social service needs.

**Closer look: How are health systems approaching longitudinal care management?**

In system-owned, deep-dive practices, it was common for multiple practices within the system to share one or more care managers. These care managers were often centrally located but spent at least some of their time (one day per week or more) embedded within any given practice to which they were assigned. In a few cases, care managers who split their time across multiple practices reported feeling "spread thin" due to the many demands placed upon them by multiple practices. However, others in similar situations reported that the arrangement worked well for them and for practices, because they could reach care managers by phone even when they were not physically in a particular practice.

Several systems, in which not all practices are participating in CPC+, were also providing care managers to non-CPC+ practices. These systems raised concerns about limiting longitudinal care management to only the CPC+-participating practices; they also saw the value of care managers and wanted all practices to benefit from their expertise. They typically noted that CPC+ funding was sufficient to cover the costs of placing care managers in the system's CPC+-participating practices, but they needed to use other system resources to support longitudinal care management in non-CPC+ practices.

**Most deep-dive practices reported that the frequency and duration of longitudinal care management contacts varied depending on the severity of individual patients' conditions.** Most often, practices reported that care managers reached out to high-risk patients about once a week or once every few weeks, with patients also instructed to call the care manager between check-ins, as needed. In a few cases, practices reported that care managers sometimes called some patients multiple times a day or week until their condition improved. Most practices reported that longitudinal care management continued for as long as a patient needed it, based on the professional judgment of the care managers and practitioners. A few practices said it was difficult to "graduate" patients out of longitudinal care management, either because patients' conditions remained complex enough to warrant these services, or because patients became attached to their care manager and did not want to end the relationship.

### What facilitators and/or challenges do CPC+ practices experience when providing longitudinal care management?

**Several deep-dive practices said the number of high-risk patients who would benefit from longitudinal care management exceeds staff capacity to provide these services**. Many practices that reported lack of staff capacity for care management have full-time or part-time care managers on staff; however, several of these practices added that if more funding were available, they would hire additional care managers to serve more patients. A few practices commented that ideally, every practice should have both a nurse and a social worker collaborating on longitudinal care management, due to patients' various needs and the different skills and knowledge each of these roles brings to care management.

**"The thing I like about CPC+ is that it's clear that it's a total population approach…and that's the way I think we should operate, but the funding is inadequate to support that. The funding is OK to support the… Medicare fee-for-service population. I think it's fair. But if you're going to extend it to the entire population, and you divide out…the care management fee across your entire population, it's not…an adequate amount."**

***—Health system chief medical officer***

**Competing priorities and staff turnover posed barriers to longitudinal care management implementation for several practices.** In the few deep-dive Track 1 practices that lacked dedicated care management staff, competing priorities and time constraints among medical assistants tasked with care management duties (in addition to their other work) resulted in little, if any, provision of longitudinal care management services to the practices' patients. In addition, several deep-dive practices reported challenges with turnover among care management staff, which impeded their progress with longitudinal care management implementation due to the time and expense involved with hiring and training new staff. One deep-dive practice attributed its turnover to the practice's inexperience with care management, which influenced its understanding of the work and its ability to assess the attributes of strong candidates effectively.

**Many deep-dive practices reported that patients were sometimes reluctant to engage in longitudinal care management.** Care managers in these practices noted that effective care management depended on patients returning their phone calls, which was sometimes a challenge. Typically, care managers said their approach to engaging patients involved calling two or three times and then sending a letter in the mail before "giving up." One care manager reported that this barrier was exacerbated by the fact that phone numbers for lower income patients frequently changed, and some low-income patients were concerned that participating would come at a cost to them, or that the care manager was calling to collect unpaid medical bills. Finally, a few practices said that low health literacy among their patients affected their willingness to engage in longitudinal care management, because patients perceive their conditions as less serious than they are. To address these barriers, a few practices noted that a "warm hand-off" of the patient by a practitioner to a care manager was the most effective way to introduce patients to longitudinal care management; these practices said in-person introductions were more effective in building trust than the care manager "cold calling" the patient.

**Having multiple modes of communication with care team members facilitated longitudinal care management.** Several deep-dive practices said it was helpful that care managers communicated with other care team members in many ways, including participating in regular care team meetings or huddles; holding phone or in-person meetings with practitioners or other members of the care team; and sending messages about high-risk patients via the EHR. This frequent, multimodal communication helped the care team better understand the role of the care manager and the potential positive effects of longitudinal care management. In contrast, a few practices described communication barriers that hindered the care manager's efforts, including practitioners not reading messages sent by care managers through the EHR, or practitioners being reluctant to meet regularly with care managers because they did not understand the role or purpose of the care manager.

**Deep-dive practices also noted that physical proximity and co-location facilitated communication overall, although sometimes it hindered team work in other ways.** For example, care team members at one practice, where the team was co-located in one room, said they could communicate constantly and just "turn around" to hold team meetings. In contrast, at another practice where practitioners and nursing staff were physically separated, care teams did not huddle, and staff reported that they occasionally did not see each other until they entered the exam room. Similarly, a few system-level care managers and population health staff who were located off-site felt disconnected from others on the care team. That said, a few deep-dive practices noted some downsides of proximity. For example, a care manager reported that sitting in "the bullpen" with other team members made it challenging to prioritize care management work, such as making phone calls to patients, because she faced so many distractions and ad hoc requests. Another practice that organized its space into pods to promote teamwork and communication within small care teams found that this change limited cross-coverage opportunities.

**More broadly, deep-dive practices described multiple benefits of longitudinal care management.** Nearly all practices reported that longitudinal care management was a positive addition to, or expansion of, the services they provided to patients. In many practices, practitioners noted that having an embedded care manager helped ensure that high-risk patients were receiving the services they needed. Capturing what several practices described, one practitioner noted that implementation of care plans often "falls apart" between medical appointments, but care managers prevent this failure by checking in with patients between appointments. A few practices noted that the efforts of care managers improved patient adherence to treatment recommendations. For example, one practice said that since hiring a care manager, it has seen decreases in hemoglobin A1c scores and cholesterol levels among high-risk patients, increased attendance in diabetes education classes, and increases in preventive screenings. A few practices added that focusing on longitudinal care management motivated them to develop a better understanding of social services available in their area.

**"Knowing that…there's somebody here to help with those patients is huge for me. And making sure that the ball doesn't get dropped."**

***—Practitioner at a large, system-owned Track 1 practice***

## C. Using a care plan for patients under longitudinal care management

### What are the requirements?

For patients receiving longitudinal care management, all Track 2 practices are required to use a care plan[46] within their EHR that centers on patients' actions and support needs in the management of their chronic conditions. CPC+ practices are not required to follow a specific care plan template, although CMS identified critical elements that care plans may contain, including treatment goals and treatment steps as identified by the care team, patient's overall health goals, advance directives and patient's preferences of care, actions that the patient and his or her care team will be taking, and the most important contingencies if the patient's conditions change.

### How are practices using care plans? Does this use vary for different types of practices?

**In our deep-dive interviews, we found that "care plan" means different things to different respondents, thus care delivery requirement data about care plan use should be interpreted with caution.** Respondents often confused care plans with components of the visit note or after-visit summary. Furthermore, deep-dive practices sometimes referred to a treatment plan for a single condition (rather than for all conditions and needs of the patient) as a care plan. Consequently, the care delivery requirement data that practices reported about use of care plans should be interpreted with caution, as they potentially overestimate the use of care plans as defined in the CPC+ Implementation Guide.

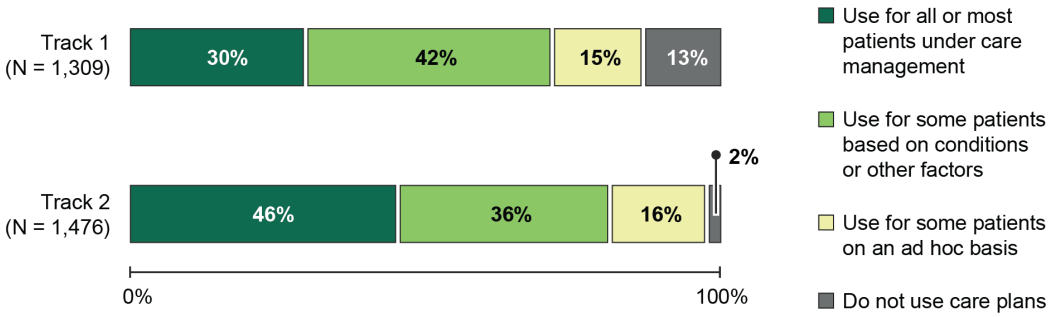
> **"It makes no sense for me to do a whole other plan [to meet CPC+ requirements]. The patient already has access to [our after-visit summary] in the portal, or we could print it out for them."**
>
> ***—Practice manager at a medium-size, independent Track 2 practice***

**At most Track 2 deep-dive practices, care managers were responsible for creating care plans.** In several practices, physicians reviewed care plans created by care managers, and at a few practices, physicians and care managers collaborated to create care plans.

**Practices reported that they use care plans most often for patients under longitudinal care management or for patients with certain conditions.** More than one-third of practices overall—including 46 percent of Track 2 practices and 30 percent of Track 1 practices (even though Track 1 practices were not required to do so)—reported that they systematically implement care plans for all or most patients under longitudinal care management; a similar proportion (39 percent of all practices, data not shown) use care plans for some patients, targeted based on conditions or other factors. (Figure 4.7 displays this data by track.) Only 7 percent of practices—13 percent of Track 1 practices and 2 percent of Track 2 practices—reported they do not use care plans in their care management processes. The remaining practices (16 percent) reported they used care plans for some patients on an ad hoc basis. Eighty-six percent of practices using care plans reported that care plans are integrated with their EHR, and 81 percent reported they had a routine process for monitoring, updating, and reviewing care plans.

[46] The CPC+ Implementation Guide also uses the term "plan of care" when describing this requirement.

**Figure 4.7. Extent of care plan use, percentage of CPC+ practices using care plans, by track**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Based on 2,785 practices that submitted data for the fourth quarter of 2017. A care plan is a mutually agreed upon and documented plan of care based on the patient's goals and available medical evidence, and is accessible to all team members providing care for the patient.

**The most common types of information that practices reported including in care plans were treatment goals and interventions identified by the care team (95 percent), the patient's overall health goals (88 percent), and the patient/caregiver plans for self-management (86 percent).** Care plans less commonly included "advance directives and preferences of care" (43 percent) and "contact information for practitioners and services involved in the patient's care" (45 percent) (Table 4.2). Beyond patient and practitioner goals, information included in care plans used by deep-dive practices tended to vary. Other elements included, for example, social supports/needs (such as level of caregiver support, adequacy of housing, or ability to afford medications), assessments of medication adherence, risk scores, and nine-question Patient Health Questionnaire (PHQ-9) depression screening scores.

**Health IT insights: Lack of industry standards for care plans**

Deep-dive practices interpreted "care plan" differently and included a range of information in their care plans. Many of the 13 health IT vendors that we interviewed indicated that it was challenging to develop new or improve existing care plan templates without a widely accepted care plan standard. Several vendors noted that this challenge limited the business case for developing templates that meet CPC+-specific requirements related to care plans and planned to charge practices to use care plan templates developed for CPC+ or were not planning to develop CPC+-specific care plan functionality.

Several deep-dive practices used only single disease-specific care plans, rather than person-centered plans that cover all of a patient's conditions and needs. Practices that only used single condition-specific care plans most often mentioned creating them for diabetes, but also did condition-specific care plans for chronic obstructive pulmonary disease (COPD), hypertension, asthma, hyperlipidemia, depression, and tobacco use. Of these practices, a few were also creating care plans for all high-risk patients, not just those with specific conditions.

**Table 4.2. Information that CPC+ practices included in care plans**

| | Overall (N = 2,553) | Track 1 (N = 1,110) | Track 2 ( N = 1,443) |
|---|---|---|---|
| Treatment goals and interventions as identified by the care team | 95% | 94% | 95% |
| Patient's overall health goals | 88% | 87% | 90% |
| Patient/caregiver's plan for self-management | 86% | 85% | 87% |
| Medication adjustments for changes in condition | 73% | 74% | 72% |
| Patient/caregiver's plan for acute changes in condition | 70% | 68% | 72% |
| Plan for next update or review of care plan with patient and care team | 69% | 69% | 68% |
| Contact information for practitioners and services involved in the patient's care, including contact options for after-hours coverage | 45% | 44% | 46% |
| Advance directives and preferences of care | 43% | 42% | 44% |

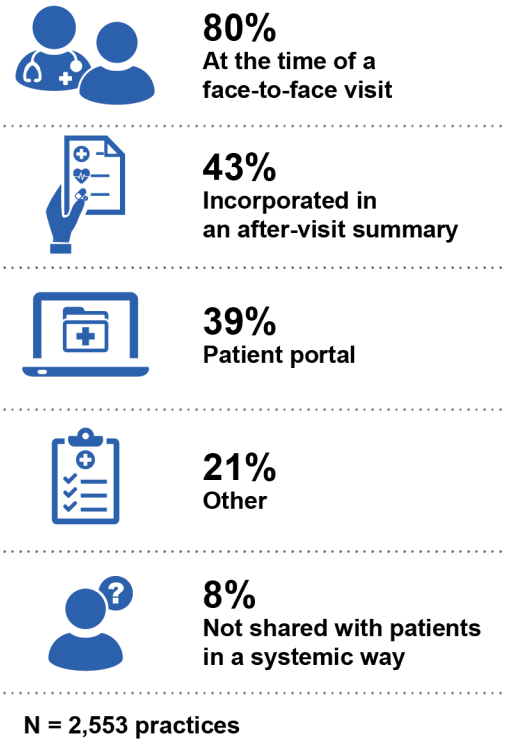
Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Based on 2,553 practices that that submitted data for the fourth quarter of 2017 and said they used care plans. Practices could select all responses that applied.

**Among the 93 percent of practices that reported using care plans, nearly all (98 percent) reported that members of the care team within the practice have real-time/point-of-care access to a patient's care plan.** Fewer practices reported real-time/point-of-care access to care plans for practitioners outside of the practice (35 percent) and community and/or social services agencies (5 percent). System-owned deep-dive practices reported an easier time sharing care plans with practitioners that worked for the same system, noting that if the same EHR were used throughout the system, these external practitioners could access care plans. In contrast, independent practices had to be more proactive in sharing care plans with specialists outside of the practice.

**Most practices reported sharing care plans with patients during a face-to-face visit (80 percent) or in the after-visit summary (43 percent).** Only 8 percent of practices said they do not share care plans with patients systematically (Figure 4.8). Deep-dive practices also provided patients access to their care plans in various formats. Most said they either give patients printed copies during their visit or mail printed copies to patients after a phone contact. Thirty-nine percent of practices also provided access to electronic copies of the care plan through the patient portal. As Figure 4.9 shows, SSP participants were more likely than non-SSP participants to report that patients and their caregivers had access to care plans through a patient portal.

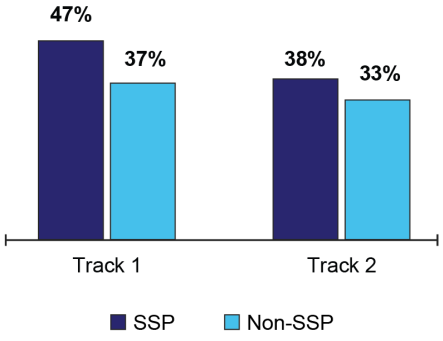
**Figure 4.8. CPC+ practice approaches to sharing care plans with patients and caregivers**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Based on 2,553 practices that submitted data for the fourth quarter of 2017 and said they used care plans. Respondents who reported sharing care plans with patients could select all approaches to doing so that applied.

**Figure 4.9. Percentage of CPC+ practices providing access to care plans through a patient portal, by track and SSP status**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Based on 2,553 practices that submitted data for the fourth quarter of 2017 and said they used care plans.

SSP = Medicare Shared Savings Program.

## What facilitators and/or challenges do CPC+ practices experience when using care plans?

**In a few deep-dive practices, practitioners were resistant to care plans for various reasons.** A few physicians protested that the care plan information already existed in the progress notes and/or the physician knew the patient well enough that they did not need a formal care plan. It was difficult convincing practitioners to re-enter into discrete fields of a care plan information that was already in their notes in a different place in their EHR. Other practitioners reported being already overwhelmed with work, unaccustomed to the care plan templates, and unwilling to add yet another step to their workflow. Finally, it was clear from our interviews that

**"[Doctors are] in and out of appointments...They don't have time to sit and go through a care plan [with the patient during their visit]."**

***—Care manager at a large, independent Track 1 practice***

practitioners often conflated the after-visit notes with a care plan. This lack of understanding about what a care plan is was an additional barrier to their uptake.

**A few small deep-dive practices mentioned the challenge of engaging patients in care planning.** Care managers in these practices cited lack of motivation of some patients to set or follow goals, despite the care manager using techniques such as motivational interviewing or even "pleading." Rather than setting goals and making lifestyle changes, they reported that patients often preferred to take medications.

**"[Patients] don't want to check their weight daily, they don't want to check their blood pressure and their heart rate. It just seems like a lot of patients don't really want to do the care plan. They don't want to get involved...The biggest challenge of the care plans is getting a patient engaged in [his or her] care."**

***—Care manager at small, system-owned Track 1 practice***

## D. Episodic care management

### What are the requirements?

CMS required all CPC+ practices to provide short-term episodic care management to a high and increasing percentage of empaneled patients who have an ED visit or hospital admission, discharge, or transfer and are likely to benefit from care management. Practices are required to contact at least 75 percent of patients within one week of discharge from an ED and 72 hours or two business days of a hospitalization. Additionally, CMS asked practices to identify patients who have had a recent diagnosis or exacerbation of illness to receive short-term care management. Episodic care management services include transition of care planning, medication reconciliation, and education.

### How are practices approaching episodic care management? Do these approaches vary for different types of practices?

**Consistent with CPC+ requirements, practices most often identified patients for episodic care management based on hospital admissions (98 percent), ED visits (92 percent), or a new health condition (75 percent) (Table 4.3)**. Similarly, most deep-dive practices focused their episodic care management on patients who went to the ED or hospital for acute issues or who developed complications after surgery or other hospitalizations. In several deep-dive practices, patients were also referred for episodic care management based on a practitioner's assessment during an office visit or information gained from a phone call with the patient. For example, physicians in one deep-dive practice referred for episodic care management patients with "significant changes"—such as a previously well-controlled condition that was no longer in control, or life changes, such as loss of housing. Typically, the physician would request that the patient remain in care management until some improvement parameter was met (for example, morning blood sugar below a certain level). In a few deep-dive practices, patients sometimes transitioned from episodic care management to longitudinal care management if their condition failed to improve.

### Table 4.3. How practices are identifying patients for episodic care management

| Method | Overall (N = 2,785) |
|---|---|
| Hospital admission | 98% |
| ED visit | 92% |
| New health condition (e.g., cancer diagnosis, accident, chronic condition) | 75% |
| New clinical instability in a chronic condition, including change in medications | 69% |
| Life event (e.g., death of spouse, financial loss) | 45% |
| Initiation or stabilization on a high-risk medication (e.g., anticoagulant) | 50% |
| Other, please specify | 21% |

Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Episodic care management refers to short-term, acute care management for patients who are not already in longitudinal care management as a result of their risk status. Practices could select all responses that applied.

ED = emergency department.

**Most deep-dive practices relied on care managers to provide episodic care management, while a couple of others relied on patient navigators or health coaches for this work.** In most practices, a nurse care manager (with registered nurse or licensed practical nurse training) who was located at the practice provided episodic care management. Similar to the approach to longitudinal care management, several system-owned practices used centralized care managers (who covered both CPC+ and non-CPC+ practices) who the system assigned to cover one or more practices. Typically, these care managers worked off-site, or spent two to three days per week in each of their assigned practices. A couple of large, system-owned practices also employed patient navigators and health coaches to provide episodic care management to patients who were hospitalized or to make home visits to patients who were homebound.

**In many practices, the same team member (typically, a nurse care manager) was responsible for both longitudinal and episodic care management.** In several other practices, longitudinal and episodic care management duties were split across two or more team members, with a nurse care manager (or in a few cases, a social worker) typically conducting longitudinal care management, and either another nurse care manager or a medical assistant, health coach, or patient navigator conducting episodic care management.

**Almost all deep-dive practices reported following up with their patients within 72 hours or two business days of discharge from a hospital and within one week of an ED visit.** Many practices combined hospital and ED follow-up workflows and aimed to contact patients from both groups within 72 hours. Practices used ED and hospital follow-up calls to:

- **Check on the patient.** Most practices reported using follow-up calls to check on a patient's condition and provide medication reconciliation. A few of these practices followed a template when contacting patients. Typical questions in the template included how the patient was doing, whether others (such as care managers from health plans or the hospital)

had called to check in on the patient, and whether the patient had questions about medications.

- **Coordinate follow-up care.** For most practices, another goal of these calls was to schedule patients for follow-up appointments with the primary care practice within 7 to 14 days of an ED visit or hospital discharge (or provide assistance to patients whose condition required follow-up with a specialist). Pre-visit planning for these follow-up appointments typically included updating the patient's record with their discharge summary and notes from their contact with the care manager.
- **Assess psychosocial needs.** Several Track 2 practices also used hospital and ED follow-up calls to assess patients' psychosocial needs and provide referrals to social services and other community resources.
- **Educate on appropriate ED use.** A few practices highlighted how the follow-up calls were an opportunity to educate patients on appropriate ED use and to encourage patients to call the practice first before going to the ED.

Although most practices followed up with patients via phone *after* hospital discharge, a couple of Track 2 practices reported that nurses or practitioners visited the patients while hospitalized to begin the transition process.

**"Obviously, if [a patient is] having crushing chest pain and…can't breathe, [I tell them they shouldn't] be calling me and telling me that. [They should] just go to the ED. But if … [the patient says] 'My legs are kind of swollen. I don't know what's going on,'…call us first, so we can possibly bring you back in here, keep you out of there, and everybody's happy."**

***—Care manager at a large, system-owned Track 2 practice***

**Hospital and ED notification processes were most efficient for system-owned practices when patients visited system hospitals with the same EHR. Notification was less consistent and timely for independent practices and system-owned practices when patients visited non-system hospitals.** In several cases, system-owned practices received daily ED and hospitalization notifications electronically, and several reported that they could log into system-owned hospital databases to obtain patient records. Independent practices and system-owned practices with patients who visited hospitals with which they were not electronically connected relied largely on faxes, Health Information Exchange (HIE) data, and payer reports for notification that their patients were in the hospital or ED; a few also mentioned that patients or family members often call to inform the practice of a hospitalization or ED visit. To improve information exchange with area hospitals outside of practices' systems (or in the case of independent practices, any area hospital), a couple of practices (of all types) said they had held meetings to develop relationships and to encourage hospitals to share patient data with primary care practitioners in a timely manner. A few system-owned practices added that they encouraged patients to go to hospitals with which they have a strong relationship, to ensure timely access to patient data.

**Deep-dive practices made efforts to improve the timeliness of notification and information transfer from hospitals and EDs, including meeting with hospital/ ED leadership, hiring internal practice staff to follow up on obtaining patient records, and investing in new EHR software.** A few deep-dive practices met with hospital/ED administrators, with positive results: one of these practices reported that after several meetings with ED administrators, the practice now receives more timely notifications when patients are discharged, and the practice has a point of contact at the ED to help troubleshoot future issues. A few other practices reported hiring new staff to reach out to hospitals for discharge notes after hospitalizations and ED visits, as well as to obtain any reports on lab tests and x-rays. Finally, a few other practices reported investing in additional health IT resources, such as an EHR software add-on that allows the practice to receive information from other hospitals and specialist groups in the region.

**"Our care manager has done a tremendous job with the transitional care management, and I think it's certainly impacted our readmissions and overall medical spending for our high utilizers…There is a big opportunity there."**

***—Practitioner in a large, system-owned Track 2 practice***

**Closer look: Coordinating with skilled nursing facilities**

Although not a formal care delivery requirement, we also asked deep-dive practices how they coordinate with skilled nursing facilities (SNFs). Highlights include:

- Most practices reported coordinating with SNFs, in a process similar to how they coordinate with hospitals and EDs.
- Similar to hospital/ED follow-up, practices reported communication challenges with SNFs, including notification of admission or discharge, receiving discharge notes, and the ability to exchange this information electronically.
- A few practices provided additional support to SNFs by traveling to see patients in the facility or sending patient information from the practice.
- A few practices are focusing more on communicating with SNFs, recognizing that such transitions "are a risky time" and require patient monitoring.

## What facilitators and/or challenges do CPC+ practices experience when providing episodic care management?

**Deep-dive practices highlighted ways that their EHR facilitated episodic care management.** Several practices described how care teams communicated via the EHR about patient needs identified through episodic care management. Care managers used EHRs to update patient charts with notes from episodic care management calls with patients and to send practitioners direct messages about issues to address during office visits. Several practices described processes they developed to ensure that

**"By the time we see the patient, [discharge summaries are inserted into patient charts, so] it's clear exactly what discharge medications the hospital has prescribed."**

***—Physician at a small, system-owned Track 2 practice with a nurse care manager***

hospital and ED discharge summaries were inserted into patient charts (either through electronic attachments or scanning) before follow-up visits, so that the care team was fully informed of patients' conditions. A few practices reported working with EHR vendors to create dashboards that displayed automatic updates when patients were discharged from a hospital or ED.

**Obtaining information on discharge summaries and test results was challenging when CPC+ practices did not have electronic access to the hospitals' EHR.** Many practices had electronic access to at least one hospital's EHR. System-owned practices reported challenges obtaining discharge information from hospitals outside of their system (who were not on the same EHR or HIE). Similarly, independent practices had poor or incomplete access to hospital and ED discharge information if they did not have a shared EHR or HIE or use a system for automatic notification of admission, discharge, and transfer information. To obtain discharge summaries from such hospitals, practice staff contact hospitals and EDs to request discharge summaries and other patient records that are later added to the patient's chart, or to schedule follow-up appointments at the practice. Without electronic access, practices may be unaware that the patient was admitted, may not get results back, or may have to rely on faxes and phone calls to relay information on the patient's hospital or ED visit.

**Deep-dive practices valued that care managers who were also nurses had the ability to apply their clinical knowledge to assist patients after hospitalizations or ED visits and to prepare practitioners and staff for follow-up visits.** Practices with care managers who were also nurses reported really valuing that added clinical expertise when it came to hospital and ED follow-up work. Several practices said that nurse care managers were especially well equipped to answer patients' questions during follow-up calls due to their clinical training. Practices added that nurse care managers gathered and assessed critical information from patients (through follow-up calls) and hospitals (through obtaining and reviewing discharge summaries) that helped practitioners and staff prepare for follow-up visits, particularly medication reconciliation.

**Deep-dive practices reported that most patients appreciated episodic care management, but sometimes patients were difficult to engage.** Practices reported that episodic care management gave patients the opportunity to ask questions, which was a relief for patients who were overwhelmed with information about their recent hospitalization or new diagnosis. However, care managers at a few practices noted that it was challenging to get some patients to come for a post-discharge follow-up appointment due to patients' financial situations, which were often stressed by the recent hospitalization or ED visit. For example, practices said that some low-income patients had trouble covering their co-pay and medication expenses. Other reasons that patients were reluctant to come for follow-up visits were that they felt too unwell to leave home or they thought that a follow-up was unnecessary because their issues were resolved at discharge.

**Practices believed that new episodic care management processes implemented as a part of CPC+ reduced ED and hospital readmission rates.** Care managers at several practices said that contacting recently hospitalized patients and reviewing their medications with them helped decrease hospital readmissions by reducing medication errors. Additionally, practices reported that increasing patient education as a part of episodic care management helped reduce ED and hospital

readmission rates. For example, one practice credited CPC+ participation with its new process of urging high-risk patients to call the practice first before going to the ED, which the practice believes has decreased unnecessary ED use. In another practice, patients often used the ED for nonurgent problems that should be addressed in primary care, and they did not feel they should follow up with the practice after ED visits. This practice enhanced its existing episodic care management efforts to include targeted education on when to utilize each level of care. At the time of the site visit, this practice reported that its readmission rate had become the lowest in its system.

### 4.6.3. Function 3: Comprehensiveness and coordination

CMS encourages CPC+ practices to provide comprehensive and coordinated care. The CPC+ Implementation Guide uses the term "comprehensiveness" in the primary care setting to refer to a practice meeting most of its patient population's medical and behavioral health needs in pursuit of each patient's health goals (CMMI 2017). "Coordination" refers to the primary care practice's central role in helping patients and caregivers navigate a complex health care system, including identifying and communicating with specialists and assisting with care transitions. Practices also work to understand their patients' health-related behavioral and social needs and identify services and community resources to meet those needs.

In 2017, for the CPC+ function of comprehensiveness and coordination, CMS required practices to meet care delivery requirements related to identifying high-volume and/or high-cost specialists (Section A), using collaborative care agreements to coordinate with specialists (Section B), coordinating with hospitals and EDs (Section C), integrating behavioral health care with primary care (Section D), assessing patients' social needs (Section E), identifying resources and supports to meet patients' unmet social needs (Section F) and enhancing practice capabilities to address unmet needs of high-risk patients (Section G). Below, we describe these CPC+ requirements for 2017, practices' progress toward those requirements, and factors that influenced their progress.

**Closer look: What data feedback on specialists did payers provide CPC+ practices?**

CMS and around one-third of other CPC+ payers provided practices with data on high-volume and/or high-cost specialists.

CMS' Medicare fee-for-service (FFS) data feedback contains a tab that displays cost and use data for the top five specialists in the 10 most costly specialties for the practice's attributed patients. For each specialist, the report provides practice-specific data on the total number of patients, visits, and expenditures. Average expenditures per visit and per patient are also reported. Practices can benchmark the use and cost of specialists to those of all other practices in their region. These data allow practices to identify specialists serving a larger number of each practice's patients and those with higher per-visit and per-patient costs. The content and structure of other payers' data feedback varied.

(Chapter 3 provides more information on CPC+ data feedback.)

#### A. Identifying high-volume and/or high-cost specialists

**What are the CPC+ requirements?**

CMS required practices to identify the high-volume and/or high-cost specialists serving their patient population, using data from CMS or other payers. (We describe the data in the text box.) Identifying these specialists may enable practices to coordinate and communicate more effectively with specialists serving a larger

number of their patients. Practices may also identify specialists with higher costs than others in the same specialty and revisit their referral patterns.

### How are CPC+ practices identifying high-volume and/or high-costs specialists?

**Many CPC+ deep-dive practices were not using the data CMS and other payers shared on high-cost, high-volume specialists.** A few of these practices planned to begin working on this requirement. A few others reported not needing to rely on reports from payers, because there are a limited number of specialists in the area, and the practice already knows about all of them. In a few other practices, respondents were not aware of the data feedback reports generally, or of a report that identified these types of specialists.

**Deep-dive practices that had used the data from payers on high-volume and/or high-cost specialists were more commonly system-owned than independent.** In several deep-dive practices, system-level staff reported that they review the data CMS sends on high-cost and/or high-volume specialists and then filter key findings down to practice staff and practitioners; practice-level respondents, however, typically reported not having seen these data. System-owned, deep-dive practices that used data from payers on high-volume and/or high-cost specialists reported that they did so to identify specialists with whom to work more closely and to develop collaborative care agreements (discussed further in Section B). Several practices had begun focusing on improving communication with high-volume and/or high-cost specialists; one practice, for example, is working to make sure it gets more timely notes back from these specialists.

> **"That [data on high-cost, high-volume specialists] is being looked at right now at the physician-leadership level to see what type of physician maybe they could pull into the network, what they can do to keep the business within the network, where we could keep the costs down, where we could have better access to the information."**
>
> ***—System chief operating officer***

**Practices tended not to consider cost when making referrals.** Recognizing that practices may consider factors other than costs and utilization in identifying specialists, we asked practices how they defined "high-value" specialists. We found:

- Many deep-dive practices defined high-value specialists as those who ***communicate well***, including taking actions such as reading the primary care practitioner's notes to avoid duplicating tests, answering questions from the PCP, and sending timely consult notes to close the referral loop. As one practitioner expressed, "You're not going to refer to somebody that's not giving you reports back; that's not fulfilling the patient's need and not fixing the problem."
- Practitioners also valued specialists who ***focus on providing care within their specialty*** and help the primary care practitioner continue to manage the broader needs of the patient as a whole. As one practitioner noted, "High-value to me would be [the specialist] who…will do the procedures I can't do safely, send my patient back to me, and let me continue to manage their everyday care."

  Several practices also emphasized the importance of considering ***patient feedback about their experiences*** in defining high-value specialists, including patients' views on factors such as a specialist's bedside manner and appointment wait times. Practitioners are less likely to refer patients to a specialist about whom they have received negative patient feedback.

- Finally, a few practitioners characterized high-value specialists as those who do not order unnecessary tests and who are *"**cost effective**."*

(The text box "Understanding referrals to specialists and related processes" provides additional details on how CPC+ practices structure referral processes and the influence of CPC+ and other factors on those processes.)

### Understanding referrals to specialists and related processes

**How do referral processes relate to comprehensiveness of primary care?**

Deep-dive practices noted that a practice culture that embraces the comprehensive role of primary care, has practitioners with strong primary care-oriented training, and encourages practitioners to consult with one another or with specialists prior to referral, provides more comprehensive primary care.

Several deep-dive practices identified lack of time and staff support and inadequate payment for patients with multiple complex conditions as contributing to nonessential referrals for patients that could otherwise be managed with more comprehensive primary care.

**How do CPC+ practices decide when to refer a patient to a specialist?**

Many deep-dive practices described the decision to initiate a referral to a specialist as a practitioner-specific decision made primarily based on the primary care practitioner's comfort level, training, and experience managing the patient's condition.

Few practices, regardless of ownership type or Medicare Shared Savings Program (SSP) participation, had formal referral protocols in place regarding how or when primary care should refer to specialists, but among the few that did, practices noted that their systems were considering how to review referral protocols and track referral trends, especially for services that could be handled in primary care.

**How is CPC+ participation changing referral processes?**

In addition to forming collaborative care agreements with specialists (see Section B), CPC+ practices are taking the following steps to change referral processes:

- **Managing more complex patients at the practice site.** Several deep-dive practices said that staff hired under CPC+ helped them manage more conditions—for example, complex diabetes—in-house rather than refer these patients to a specialist, such as an endocrinologist.
- **Hiring new staff to track referrals.** System-owned practices in particular were hiring or repurposing staff to enhance referral tracking and follow-up. This work also supported practices' efforts to meet the electronic clinical quality measure (eCQM) on "Closing the referral loop" by ensuring receipt of specialists' reports.

Deep-dive practices had mixed predictions about how CPC+ might affect the volume of specialist visits. Several believed that the volume would decrease, because they would be better able to identify and manage higher risk and more complex patients in primary care. A few other practices thought referral volumes would increase in certain specialties, given the focus of CPC+ on recommended screening tests (for example, diabetic eye exams or colorectal cancer screening). Several practices expected no change, noting that they were already careful about referrals.

### Understanding referrals (continued)

**What other factors influence practices' referral processes?**

- **Variation in specialists' workflows.** Because specialist offices, even within the same health system, can have different referral preferences and workflows (some specialists reach out to the patient to schedule the visit, others prefer that patients reach out to them, and still others prefer to work with the primary care practice to schedule the visit), many deep-dive practices reported that it was burdensome on staff to schedule appointments with specialists and follow up to make sure patients made their appointment. Practices also faced different requirements from specialists about whether they needed patient information before scheduling appointments.
- **EHR functionality.** Most deep-dive practices used their electronic health record (EHR) when possible to facilitate the referral process, but several noted EHR functions that could be improved to better support this work. Several practices reported they actively reviewed EHR referral process indicators (for example, unscheduled referrals, missing consult notes) to support follow-up with patients and specialists, and a few practices noted the benefits of EHR features that flag referrals as "pending" until consult notes are received and that provide access to the date of the patients' scheduled appointments with specialists. However, several practices noted challenges using their EHR to document when referrals are initiated, scheduled, or closed, and were concerned that they therefore lacked the documentation needed to "get credit for" the eCQM measure on closing the referral loop.
- **Interoperability of EHRs or access to HIEs.** Many deep-dive practices, particularly system-owned practices, noted that having primary care and specialist practices on the same EHR simplified information transfer, because data are automatically visible to all practitioners and staff. A few practices also mentioned the helpfulness of using a Health Information Exchange (HIE) platform for sharing information, particularly with specialists outside of their EHRs. When the primary care and specialist practices did not have connectivity, practices relied on faxes and phone calls for information exchange.
- **Inadequate specialist availability.** Limited specialist availability, either from an inadequate supply of specialists in more rural or underserved areas or because patients' health plans limited specialists' networks, challenged many practices. Several practices noted long wait times for specialties such as psychiatry, neurology, and endocrinology.
- **Self-referrals or specialist-to-specialist referrals.** Most practices described these referrals as happening "rarely," or as the patient's "right," though several indicated that such referrals fragment care and can add unnecessary costs. Some strategies to dissuade these referrals include educating patients about their medical conditions, the role of primary care as their medical home, and the appropriate use of specialists; encouraging patients to call their primary care practitioner (PCP) before self-referring; asking patients to visit the primary care practice first; and barring all else, asking patients to ask their specialists to send consult notes to their PCP. Practices that educated patients about specialist-to-specialist referrals advised patients to return to the primary care practice before visiting another specialist, because, as one practitioner noted, "Nine times out of 10, you don't have to see anybody else."

### What facilitators and/or challenges do CPC+ practices experience in identifying high-volume and/or high-cost specialists?

**Deep-dive practices that had seen data on high-volume and/or high-cost specialists had mixed views about their value.** A few practices cited specialist cost information as helpful and noted that providers were less likely to refer to higher cost providers when they knew about comparable options. Other practices explained that these data cover only one factor that practitioners consider when making referrals, and that it can be difficult to change referral patterns. They noted that, for example, the location of the specialist, insurance issues, and patient preferences also come into play when practitioners select a specialist. Illustrating the balancing act involved in influencing referral behavior, a CPC+ coordinator in one deep-dive practice noted, "[Primary care practitioners] all have their referral patterns, and I'm not going to roll in and say, you've got to change it. I'm going to give them the information that I can glean, and they can do with it what they choose."

Although identifying high-volume, high-cost specialists is important, there are several other aspects of referrals and specialist use that influence the coordination and comprehensiveness of care. In the text box above, we cover findings on these topics from the deep-dive practices.

## B. Using collaborative care agreements to coordinate with specialists

### What are the CPC+ requirements?

The CPC+ model notes that "collaborative care agreements" (sometimes referred to as care coordination agreements or care compacts) are used to set expectations about roles and information sharing between providers across settings. Primary care practices are expected to focus on establishing these agreements with specialists and/or other care providers that are used more frequently by the practices' patients or are higher cost. CMS required Track 1 CPC Classic and Track 2 CPC+ practices to maintain or initiate collaborative care agreements with at least two groups of specialists that a practice identified based information in reports from CMS and other payers.

### How are CPC+ practices approaching collaborative care agreements?

**Overall, almost three-quarters of CPC+ practices (72 percent) reported using collaborative care agreements to support coordination and collaboration with specialists.** Consistent with the 2017 Track 2 requirement, more Track 2 than Track 1 practices used collaborative care agreements (86 percent of Track 2 versus 57 percent of Track 1). The most common types of specialists with whom CPC+ practices established formal collaborative care agreements were in the areas of cardiology (37 percent), gastroenterology (32 percent), behavioral health (26 percent), and endocrinology (23 percent). Deep-dive practices with collaborative care agreements in place used those agreements to:

- Set expectations for communication between primary care practitioners and specialists (for example, required referral information, timely delivery of consult notes);
- Improve access to specialty services (for example, a timeframe of two weeks to schedule appointments); and
- Clarify co-management boundaries, so that specialists do not take over patient management (for example, practitioners could request one consult visit to help select medication).

### What facilitators and/or challenges do CPC+ practices experience establishing collaborative care agreements?

**Establishing collaborative care agreements was easier when the deep-dive practice and the specialist were in the same health system and already had a good working relationship; having good examples of these agreements was also helpful.** It was easier for practices to form these agreements when the CPC+ practice and the specialists belonged to the same system, because of shared health IT support and resources. System-owned practices typically had high-level system staff to engage and encourage specialists to participate in collaborative care agreements and held monthly multispecialty group meetings to discuss roadblocks to communication and solutions. Independent practices pointed to the importance of existing relationships with specialists, noting that these agreements only "formalize" strong relationships that already exist between providers. Practices also noted the benefits of having good examples of collaborative care agreements from CPC+ learning supports, especially those that clearly defined responsibilities and expectations for both primary care and specialists.

**Several deep-dive practices noted how collaborative care agreements have increased the receipt of consult notes and otherwise improved communication with specialists.** As one practitioner said, a collaborative care agreement "helps all of us to have a guideline and helps us to rise up to meet our roles and be more responsive to requests." Several practices said that the agreements prompted frank conversations with specialists about expectations for communication (for example, about the importance of specialists following up with primary care practitioners before referring patients to other specialists), which has improved communication.

> **"When the care compact requirement came out… [working on] it did help us, because we were having trouble with an oncology group, and it…let [us] bring them to the table. It let us sit down and tell them, these are our struggles, and open up that communication with them, so they know when they do see our patients, they'll give [consult notes] back to us."**
>
> ***—CPC+ coordinator at a small, system-owned Track 1 practice***

## C. Coordinating with hospitals and EDs

### What are the CPC+ requirements?

CPC+ required practices to "identify hospitals and EDs responsible for the majority of patients' hospitalizations and ED visits, and to assess and improve timeliness of notification and information transfer, using CMS/other payers' data." In this section, we highlight findings related to hospital and ED coordination. We provide additional information on the timeliness and notification processes for hospitalizations and ED visits, and how EHRs and health IT facilitate this work, in the discussion of episodic care management (Section 4.6.2, Part D).

### How are CPC+ practices coordinating with hospitals and EDs?

**Whether deep-dive practices used data to identify the hospitals and EDs used most often by their patients depended on how many hospitals and EDs were in their area.** Many practices had not used data to identify their higher volume hospitals or EDs, because there were only one or two hospitals and EDs in the area—so they "just knew" where their patients were going, without reviewing data. A few practices (all system-owned) reported using data to identify the hospitals and EDs to which their patients were commonly admitted. Of these

practices, only one used CMS data, and the remaining practices reported using data from their HIE or EHR to identify these hospitals/EDs.

**Many deep-dive practices reported coordinating information exchange with at least one hospital and ED electronically.** Practices reported having access to other hospitals' and EDs' information through HIEs, sharing EHRs due to system ownership, or by accessing a large EHR vendor's system, which gives practices access to hospitals across the country that use that vendor's EHR. Several of these practices receive an automatic email whenever a patient is admitted or discharged from a hospital or ED.

**"We're in the health exchange in this area, and that covers pretty much…33 hospitals. I can't think of a hospital in our area, where a patient would go, that we wouldn't get information from. It's an electronic notification service….We send [a list of] our entire patient population to the health exchange, and when one of our patients shows up, registers at an emergency room, or is admitted to the hospital or discharged from the hospital, we're notified."**

***—Chief medical officer at a large, system-owned Track 2 practice***

## D. Integrating behavioral health care with primary care

### What are the CPC+ requirements?

CPC+ required Track 2 and Track 1 CPC Classic practices to choose and implement at least one of two options for integrating behavioral health into primary care. The first option, Care Management for Mental Illness, is typically carried out by a care team comprising a primary care practitioner, a care manager (often a behaviorally trained nurse) who provides self-management support and frequent follow-up, and a psychiatrist who supports the care manager and provides decision support. The psychiatrist should be connected to the primary care team both via telephone and through the EHR. The second option, the Primary Care Behaviorist model, specifies that a behavioral health provider (psychologist, clinical social worker) is integrated into the primary care workflow through warm hand-offs and co-location. The behavioral health specialist provides short-term therapy for behavioral health conditions and coordinates with specialists for serious mental illness and substance abuse.

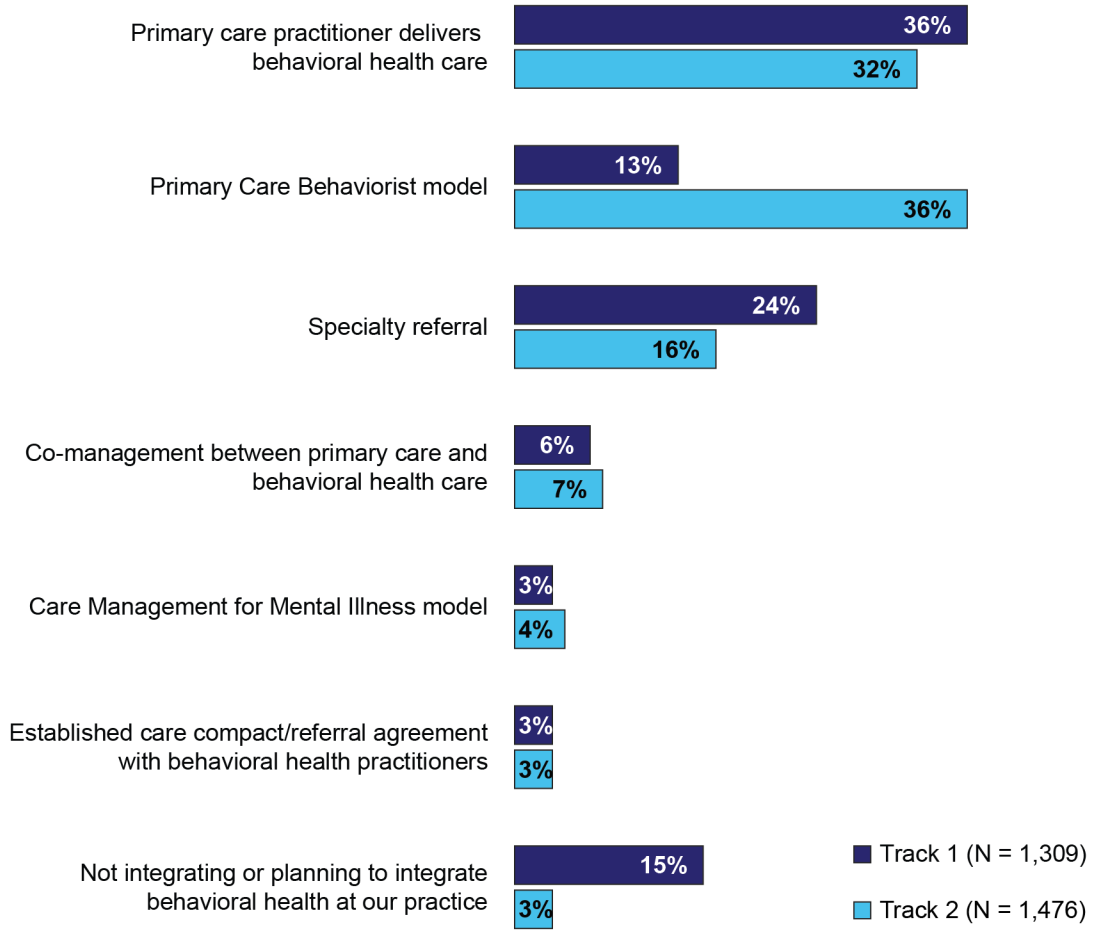
### How are CPC+ practices integrating behavioral health into primary care?

**Nearly all Track 2 practices (97 percent) and a high percentage of Track 1 practices (85 percent) reported that they were integrating behavioral health at their practice, typically using a combination of strategies.** Having the primary care practitioner deliver behavioral health care was the most common behavioral health integration (BHI) strategy for Track 1 practices, and the second most commonly reported strategy among Track 2 practices (Figure 4.10). It is notable that such a high proportion of Track 1 practices reported pursuing BHI when CPC+ did not require them to do so. Among Track 1 deep-dive practices that had integrated BHI, a few practices noted they had the strategy in place before CPC+ began, while a few that were still in the planning stages said they were adopting the strategy because practitioners and/or system leaders viewed it as a best practice.

**The Primary Care Behaviorist model was much more common than the Care Management for Mental Illness option.** For example, among Track 2 practices, 36 percent used the Primary Care Behaviorist model, and only 4 percent used the Care Management for Mental Illness model (Figure 4.10). Consistent with this finding, deep-dive practices generally

preferred the embedded Primary Care Behaviorist model. In fact, one system solicited input from practices on the type of staffing approach they preferred: care managers who could coordinate behavioral health care, or co-located behavioral health specialists. Practitioners overwhelmingly voted for the latter. Although practices generally pursued the Primary Care Behaviorist model, practices often had a variety of supports, representing aspects of both models, or chose models of their own, such as telehealth in a few rural areas. One independent Track 2 deep-dive practice, for example, offered telehealth services and planned to hire a social worker for counseling, hire a care manager for behavioral health coordination, and work with an off-site psychiatrist for referrals and "curbside consults."

**Figure 4.10. CPC+ practices' primary behavioral health integration strategies**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017. Practices could check multiple response options.

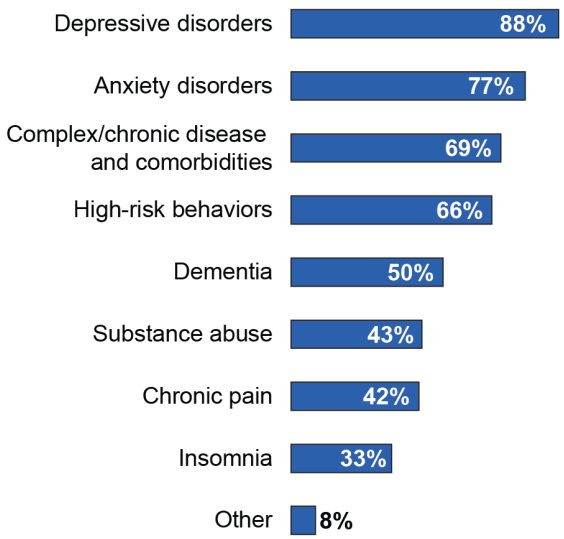
**Although a few deep-dive practices offered BHI prior to CPC+, many Track 2 and several Track 1 practices had added or planned to hire new staff to support BHI since CPC+ began**. Typically, practices hired social workers for this role; a few other practices (both

tracks) had hired or planned to hire other embedded behavioral health specialists, such as psychologists or psychiatrists, or had not yet decided the type of behavioral specialist they wanted (social worker or psychologist).

**Several deep-dive practices began systematically screening for depression as a result of CPC+ or introduced additional screening for anxiety, dementia, or substance abuse if they had already been screening for depression.** At several deep-dive practices, medical assistants or nurses administered the screenings directly or reviewed the completed forms from patients and entered the information into the EHR. At a few practices, practitioners administered screenings themselves or administered certain types of screenings, such as cognitive or suicide assessments, when they deemed it necessary. A few deep-dive Track 2 practices noted that EHRs supported the screening work by reminding practitioners to complete assessments, highlighting positive screening results—for example, on the Patient Health Questionnaire two-item screening tool (PHQ-2)—in red text, and automatically opening longer screening tools (for example, the PHQ-9) based on patients' responses. Many deep-dive practices (more often system-owned than independent) recorded patients' scores from these screening tests in their EHR, and several Track 2 practices and a few Track 1 practices tracked the scores over time.

**The conditions that CPC+ practices most commonly targeted with their behavioral health strategies were depressive disorders (88 percent) and anxiety disorders (77 percent) (Figure 4.11).** Reflecting their patients' complexity, 69 percent of practices were targeting behavioral health strategies to patients with comorbid conditions.

**Figure 4.11. Mental health conditions targeted through practice's behavioral health strategy**

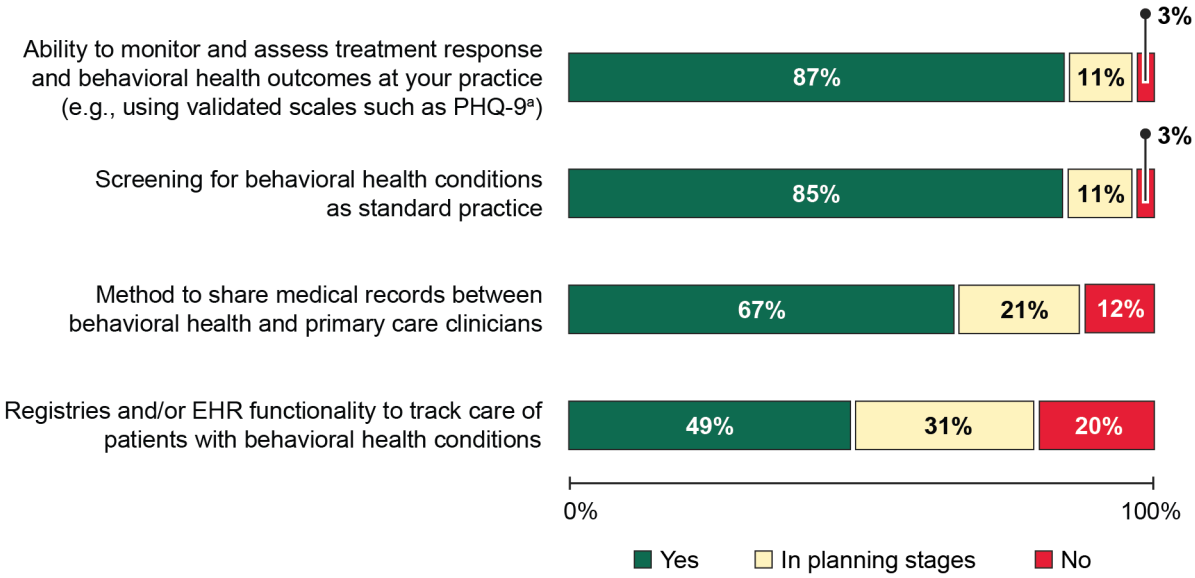



Source: Mathematica's analysis of 2017 (Q4) Care Delivery Requirement reporting data from the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017. Practices could check multiple response options.

**Most CPC+ practices had the capability to monitor and assess responses to treatment and other behavioral health outcomes, but just less than half had EHR functionality to track care of patients over time**. As part of their CPC+ care delivery reporting, practices reported which behavioral health capabilities they had available to support patients with these and other behavioral conditions. Eighty-seven percent of practices indicated that they had the capability to monitor and assess treatment response and behavioral health outcomes, and 85 percent of practices indicated that screening for behavioral health conditions was a standard practice. Fewer CPC+ practices had established methods to share medical records between behavioral health and primary care clinicians (67 percent had this capability in place) or had registries and/or EHR functionality to track care of patients with behavioral health conditions (49 percent) (Figure 4.12).

**Figure 4.12. CPC+ practice capabilities to support behavioral health care**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017.

[a] PHQ-9 is a nine-question patient health questionnaire that focuses on depression.

**Although deep-dive practices with embedded behavioral health specialists were able to do more routine behavioral counseling in-house, they referred patients with serious mental illness externally.** Deep-dive practices with embedded specialists typically referred more complicated patients or patients in crisis to outside behavioral health providers. In addition, they commonly referred patients elsewhere after a few in-house sessions, because in-house services are intended to be time-limited. One practice noted that despite having multiple embedded behavioral health specialists, it still referred patients to specialists outside of the practice, because a high proportion of its patient population had behavioral health needs.

### What facilitators and/or challenges do CPC+ practices experience with BHI?

**Deep-dive practices described several benefits of providing behavioral health care in the primary care setting.** These benefits included (1) increased access to behavioral health care and, more generally, better care for patients; (2) improved communication between primary care practitioners and behavioral health providers; (3) reduced ED use; and (4) increased comfort level among patients with receiving behavioral health care. A few practices noted a stigma still strongly associated with behavioral health care, particularly for older patients, while others noted that techniques such as having patients independently complete the assessment forms and using warm hand-offs and face-to-face visits helped to increase comfort levels and build trust.

**However, buy-in to the BHI model was mixed at a few deep-dive practices**. A couple of practices with an embedded behavioral health specialist found that buy-in was strongest for primary care practitioners whose offices were located in the same hallway as the behavioral health specialist. One practice started BHI with just one nurse practitioner's patient panel before expanding the social worker's caseload to all patient panels, which helped minimize practitioner resistance. Some deep-dive practices were still trying to understand how to assimilate and train

newly hired social workers. Social workers in a couple of deep-dive practices were hesitant to collaborate with primary care practitioners, because they wanted to preserve patients' privacy. One practice addressed this issue by emphasizing the importance of huddles and collaboration and by asking patients for permission to share information from the interaction with the social workers with the primary care practitioners.

**System-owned practices benefited from staffing and institutional resources for BHI.** Systems often supplied the staff for BHI in practices. In addition to funding staff for new BHI models, a few systems' existing behavioral health resources helped to ensure patients' access to behavioral health care beyond the practice. For example, one deep-dive practice noted that its patients could go to its system's urgent mental health clinic if its embedded counselors were not present; another practice noted that its system provided affordable behavioral health care for patients. A few systems invested in training and QI efforts for BHI. For example, one system offered a three-day retreat to educate practitioners about BHI; practitioners reportedly felt more comfortable with the new approach after attending. Leadership at another system was collecting data to inform QI efforts focused on BHI.

**Several Track 2 system-owned deep-dive practices noted that their embedded behavioral health specialists had access to the EHR, which facilitated communication with practitioners**. These specialists were able to document patient information in the EHR, which helped practitioners stay informed. Streamlined communication was also possible in telehealth models. One practice noted that the telehealth psychologists were on the same EHR and could request that practitioners prescribe medications for shared patients.

**"Being part of the medical record, it really makes the difference…So when we have something going on with a patient, I'm part of that. So say you have somebody and you're worried about them, they're very depressed, you can consult openly. There's not that barrier…[that you'd have] in private practice, making sure there are releases and then…playing telephone tag, and that kind of thing."**

***—Social worker at a large, system-owned Track 2 practice***

**Most deep-dive practices cited limited behavioral health resources in their community as a key barrier to meeting their patients' behavioral health needs.** Several practices mentioned deficits, including an inadequate supply of psychiatrists, substance abuse services, and outpatient behavioral health care for referrals. Several also noted that some behavioral health providers did not take their patients' insurance. Some questioned the value of screening when there were few providers to whom they could refer patients who screened positive. Others noted strategies to overcome the access issues, such as offering telehealth, referring to emergency hotlines, and relying on a county Medicaid contact to help with referrals when needed. A few practices also attributed delays in hiring behavioral staff for the practice to a shortage of behavioral health providers in the field, followed by space constraints in the practice.

**"Some of our mental health people, they're scheduling pretty far out…[or] wouldn't take a particular insurance, so the telehealth has really benefited some people, too, in the fact that they're talking to a person on the screen, they're in a room by themselves privately. I think they're a little bit more comfortable."**

***—Nurse at a small, system-owned Track 2 practice***

## E. Assessing patients' social needs

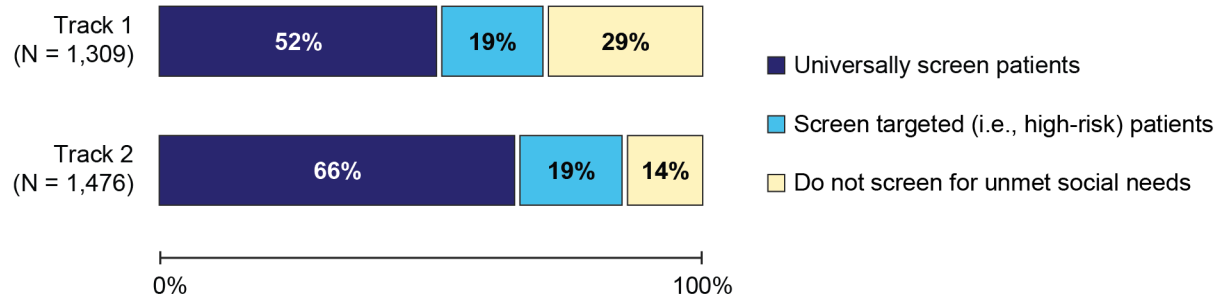
### What are the CPC+ requirements?

CPC+ required Track 2 practices to systematically assess their patients' social needs using evidence-based tools. Social needs include food and job insecurity, exposure to violence, lack of heat and shelter, lack of transportation to obtain social and health care services and materials, and other social issues (CMMI 2017).

### How are CPC+ practices assessing the social needs of patients?

**Across all practices, 85 percent of Track 2 and 71 percent of Track 1 practices reported that they screen patients for unmet social needs.** More reported doing so for all patients than just for high-risk patients (Figure 4.13). Almost all Track 2 deep-dive practices reported assessing social needs of at least some patients, with almost half of them reporting that they used a social needs screening tool as a result of CPC+. Most deep-dive practices reported using formal screening tools to do so. For example, two practices reported using the social needs screening template that was part of their EHR, with one of those practices noting that the assessment tool was electronically linked to their risk-stratification methodology. Deep-dive practices most commonly conducted these assessments during a patient's annual wellness visit, although a few practices reported assessing patients during every in-person visit. Most commonly, clinical support staff (such as a registered nurse or licensed practical nurse) administered the assessment at the beginning of the visit. At a few practices, front-desk staff gave patients a questionnaire to fill out in the waiting room during the check-in process.

**Figure 4.13. Percentage of CPC+ practices that screen for unmet social needs**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017. Practices could check multiple response options.

**Several Track 2 deep-dive practices were in the process of implementing a workflow to assess the social needs of every patient using a screening tool.** A few of these practices were piloting social assessment tools on a smaller group of patients, to inform how to roll out the tools to a larger patient population. Other practices had attempted to roll out the screening tool to all patients but found that practice staff weren't using the tool consistently with all patients.

**A few Track 2 and most Track 1 deep-dive practices reported assessing social needs only through occasional, informal conversations between practitioners or care managers and patients.** For these practices, conversations about social needs did not appear to occur systematically with all or most patients. Moreover, a few of these practices were small and may have been system-owned or independent, and practitioners and other staff reported that close relationships with patients allowed their staff to understand their patients' social needs without a formal assessment. The differences in approaches by track is consistent with these care delivery requirements not applying to Track 1 practices.

**Many practices reported using their EHR to document and track the social needs of their patients, though several felt their EHR lacked the functionality to support such tracking.** Among all CPC+ practices that screened patients for unmet social needs, slightly more than half (59 percent) reported in the CPC+ care delivery requirement reporting data that these screening tools are integrated with their EHR. This percentage was higher for Track 2 practices (67 percent) than for Track 1 practices (48 percent). Several Track 2 deep-dive practices said that the screening tool was built into their EHR, allowing clinicians to see the screening questions and record answers in discrete fields. A few Track 2 practices reported documenting information about social needs in a free text field (rather than a structured data field) or scanning paper copies of the tool into the EHR as an attachment, thus making data unsearchable. Several Track 2 practices reported not using their EHRs to *track* social needs, most commonly because staff and leaders did not think their EHRs had the functionality to do so.

### What facilitators and/or challenges do CPC+ practices experience in assessing patients' social needs?

**Deep-dive practices noted the value of CPC+'s focus on social needs and on having staff with time and expertise to assess and help meet those needs.** A few deep-dive practices described how social needs assessment helped them better understand their patients' holistic needs, especially the nonmedical barriers they face to meeting their health goals. Also, several practices said that because of CPC+, the practice was able to dedicate staff such as social workers or care managers with the time and expertise needed to assess and meet the social needs of their patients, because physicians lacked the time to inquire sufficiently about these needs. Conversely, several practices that did not have staff with adequate time or expertise reported difficulties either having conversations with patients about social needs or connecting patients to resources to meet those needs. Most practices that reported valuing CPC+'s focus on social issues were part of a larger health system or SSP. (We lack data as to why this may be the case; one could speculate that practices in SSPs and larger systems have more resources for social workers or have aligned quality goals with CPC+.)

> **"[Without the additional staff types added as a result of CPC+], doctors don't really have time to pay attention to [whether] somebody can't afford their medications because they're trying to eat."**
>
> ***—Medical assistant at a large, system-owned Track 1 practice***

## F. Identifying resources and supports to meet patients' unmet social needs

### What are the CPC+ requirements?

CPC+ required Track 2 practices to create and maintain an inventory of resources and supports that meet patients' psychosocial needs within their health IT. In compiling these resources and supports, practices were encouraged to take advantage of local and state organizations that maintain and regularly update databases of community-based resources and supports, as well as recommendations from patients, caregivers, and colleagues.

### How are CPC+ practices identifying resources and supports to meet unmet social needs?

**Ninety-three percent of all CPC+ practices (89 percent of Track 1 practices and 97 percent of Track 2 practices) reported maintaining or having access to an inventory of social service resources.** Among those with an inventory, 41 percent reported updating it on an ad hoc basis only, and 15 percent reported integrating their inventories with their EHR. Similarly, nearly all deep-dive practices said they had access to an inventory of resources; most already had an inventory of resources before CPC+, although a few noted that CPC+ helped them refine or update their inventories. Deep-dive practices most commonly accessed and updated their inventories both electronically and on paper, although a couple had the inventories available on paper only. Practice staff commonly reported that electronic inventories were easier to search, update, and share among staff. The only Track 2 deep-dive practice that did not yet have an inventory of resources was in the process of creating one, using the results of its social needs assessments to guide which resources it will include. The types of community-based resources that Track 2 deep-dive practices most often connected with on behalf of their patients addressed needs related to safety (intimate partner abuse, elder abuse, community violence), transportation, social isolation, limited financial resources, and food insecurity.[47]

### What facilitators and/or challenges do CPC+ practices experience identifying resources and supports to meet unmet social needs?

**Several deep-dive practices had multiple inventories of resources, each one created by practice staff who did not know that other inventories already existed.** These practices were all system-owned, and our interviews suggested that these systems may have only trained system-level social workers or care managers to use their inventories, leaving practice-level nurses and practitioners unaware of this resource. Having different staff create and use their own inventories of resources was inefficient, and staff at these practices commonly reported frustration at the time-consuming, burdensome nature of creating and maintaining their own separate inventories. Several systems circumvented this inefficiency by educating practices about their central inventory of resources, which they put on an internal website or emailed to practices monthly.

[47] We asked the Track 2 deep-dive practices to track for a two-week period the connections they had with outside community resources focused on helping to address the non-medical needs of their patients. For each connection, practices recorded the type of service or need the community resource was involved in helping them to meet.

## G. Enhancing practice capabilities to address unmet needs of high-risk patients

### What are the CPC+ requirements?

CPC+ required Track 2 practices to characterize important needs of subpopulations of high-risk patients, using data provided from CMS, from other payers, or internally from their health IT. After assessing the data, practices were asked to identify a practice capability that they could develop that would meet the needs of the high-risk patients and track those needs over time. These needs might be medical, behavioral, or health-related social. For example, a practice that sees many patients with dementia might improve the supports it provides for these patients and their caregivers, such as documenting patient wishes for end-of-life care, establishing a caregiver support group, and revising workflows to make sure the practice communicates with caregivers.

### How are CPC+ practices enhancing their capabilities to address unmet needs of their patients?

**Eighty percent of practices reported that they plan to further develop behavioral health care in the coming year, and roughly one-quarter reported focusing on medication therapy management or chronic pain management (Table 4.4).** Several deep-dive practices had begun bringing resources in house to improve their ability to meet the needs of certain sub-populations of patients. Specific capabilities that deep-dive practices were developing included:

- Hiring social workers to better manage behavioral health;
- Improving monitoring of patients with diabetes, particularly by training staff on foot exams and retinal scans;
- Providing in-house classes for patients on topics such as smoking cessation and managing diabetes;
- Implementing telehealth technology;
- Improving the management of patients with specific diseases, such as COPD, congestive heart failure, and diabetes; and
- Systematically identifying patients who should be referred to system-funded programs, such as diabetes clinics or fall-prevention programs.

**Table 4.4. Services CPC+ practices plan to further develop in the upcoming year**

| Services | Overall (N = 2, 541) |
|---|---|
| Behavioral health care | 80% |
| Medication therapy management | 27% |
| Chronic pain management | 24% |
| Palliative care | 15% |
| Gynecological services | 12% |
| Other | 18% |

Source: Mathematica's analysis of 2017 (Q3) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,541 practices that submitted data for the third quarter of 2017. Practices could check multiple response options.

### 4.6.4. Function 4: Patient and caregiver engagement

CMS encourages CPC+ practices to promote patient and caregiver engagement in health care delivery by requiring practices to involve patients and caregivers in efforts to guide practice improvement and to integrate self-management support into usual care. Patient and caregiver involvement in practice improvement aims to draw on the experience and expertise of patients and their caregivers to identify the strengths of practices, offer insights on areas for improvement, and provide ideas for solutions (Section A). Self-management support aims to enhance patients' willingness and ability to manage their own health care (Section B). Engaged patients equipped with information about their conditions and available services are expected to take a more active role and make more informed choices about their health care (CMMI 2017).

#### A. Engaging patients in practice improvement

#### What are the CPC+ requirements?

All CPC+ practices were required to establish a PFAC consisting of patient advisors who were either patients who received care at the practice or their family members and/or caregivers. In 2017, Track 1 practices were required to convene a PFAC at least once, and Track 1 CPC Classic and Track 2 practices were required to convene a PFAC in at least two quarters. Practices were also encouraged to regularly assess patients' experience of care and engage patients as partners through surveys and other mechanisms beyond the PFAC to guide improvements in health care delivery.

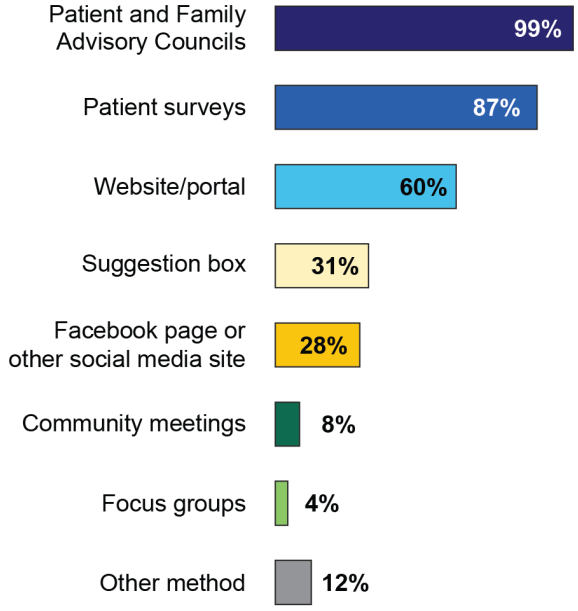
#### How are CPC+ practices engaging patients for practice improvement?

**Nearly all practices established a PFAC to work on procedures, processes, and QI and met CPC+ requirements for PFAC meeting frequency.** CPC+ care delivery requirement reporting data indicate that 99 percent of practices had taken steps to establish a PFAC. Most practices had identified staff to lead and participate as members of the group (89 percent), recruited patients and caregivers (patient advisors) to participate as members of the group (88 percent), determined the structure of the PFAC (87 percent), and/or defined the mission and vision of the PFAC (83 percent). Fewer practices had developed a plan for sustaining their PFAC after CPC+ ends (57 percent). Practices in Track 1 reported that they held at least one PFAC meeting, and practices in Track 2 typically held two meetings in the first program year.

**Deep-dive practices sought to recruit patient and caregiver PFAC participants who represented their overall patient population and would share feedback.** Several practices recruited patient advisors of different ages and races, and with different medical conditions, as well as some who were parents of young children and some who were not. Commonly, practices relied on physicians and other clinical staff to nominate PFAC patient advisors, and encouraged them to identify patients and caregivers whom they thought would speak up and contribute to PFAC meetings openly and honestly. Several practices also advertised on their website or via fliers to recruit PFAC patient advisors. Reflecting these recruitment strategies, CPC+ care delivery requirement reporting data indicate that 45 percent of practices rated their PFAC as "moderately" representative of their overall patient population and an additional 29 percent rated their PFAC as "very" or "completely" representative; only 2 percent rated their PFAC as "not at all representative."

**Most practices included a mix of practitioners and clinical and nonclinical staff in their PFACs, but a few deep-dive practices intentionally excluded practitioners.** According to CPC+ care delivery requirement reporting data, 70 percent of practices included practitioners (medical doctor/doctor of osteopathic medicine, nurse practitioner, physician assistant) as members of the PFACs, 85 percent included clinical staff (registered nurse, licensed practical nurse, medical assistant, care manager), and 87 percent included nonclinical staff (such as administrators, front office staff, and IT support). Roughly half of deep-dive practices that included practitioners and clinical staff in PFAC meetings said they did so because it reinforced to patient advisors that the practice was truly interested in hearing their feedback. In contrast, a few practices said that they excluded practitioners from PFAC meetings out of concern that their presence might inhibit patient advisors from sharing openly.

**Figure 4.14. Percentage of CPC+ practices that reported using various methods for engaging patients and caregivers in practice improvement**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017. Practices could check multiple response options.

**In addition to PFACs, practices used other methods—especially surveys—to collect feedback on patients' care experiences.** CPC+ care delivery requirement reporting data show that 99 percent of practices used PFACs to engage patients and caregivers in practice improvement, 87 percent engaged patients through surveys, 60 percent engaged patients via websites or portals, roughly one-third used suggestion boxes, and 28 percent reported using some form of social media (Figure 4.14). Most deep-dive practices reported using existing surveys such as the Consumer Assessment of Healthcare Providers and Systems or surveys developed by the practice or its affiliated system to solicit feedback from patients. Deep-dive practices varied in how frequently they fielded surveys and whether they surveyed a sample of patients or their full patient population.

**Most practices made changes to improve patients' experience of care in response to patient and caregiver feedback.** CPC+ care delivery requirement reporting data indicate the most common areas of practice change were communication and customer services, patient access and flow, and patient education and outreach (Figure 4.15). Deep-dive practice gave examples of changes made in response to patient and caregiver feedback in these and other areas:

- **Communication and customer service.** Several deep-dive practices boosted their communication and customer service by, for example, training front-desk staff on communication skills, upgrading telephone and answering systems, requiring all staff to wear name tags, and providing entertainment options such as magazines and Wi-Fi in waiting rooms.

- **Patient access and flow.** Several deep-dive practices improved patient access and flow, for example, by decreasing wait times using strategies such as reducing the amount of time they asked patients to arrive in advance of appointments, informing patients by text message when practitioners were running late, and limiting the number of patients scheduled at any given time.

- **Patient education and outreach.** A few deep-dive practices increased the amount of patient education that was included in visits. One practice offered workshops to help patients and their caregivers create "health binders" to keep their health information organized, and a few others created tools such as information sheets and refrigerator magnets listing the practitioners and other clinical and nonclinical staff at the practice, the services they provide, and their contact information.

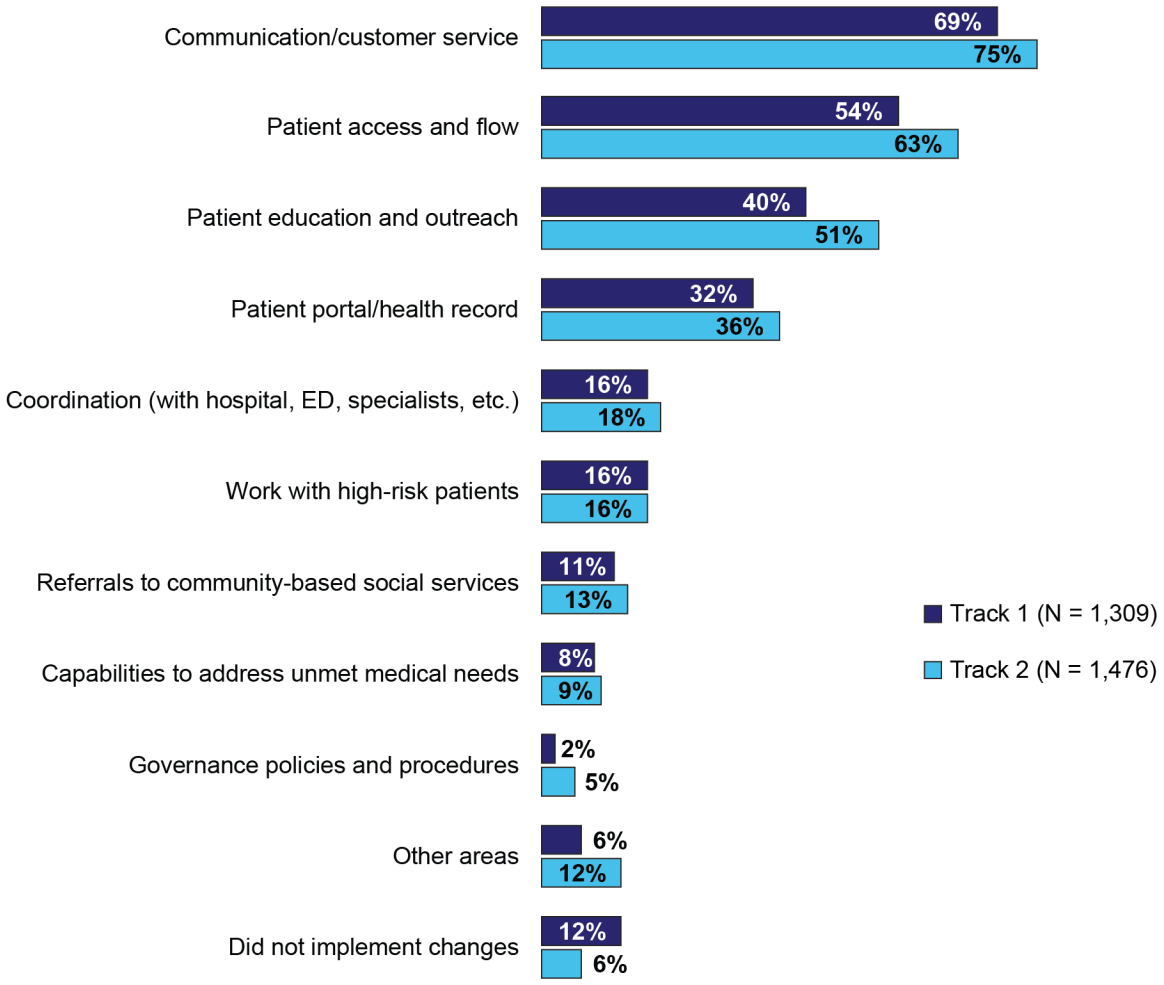
**"Patients take the binder [that organizes their health information] home and…to their other doctors. It's a kind of communication log between other physicians, us, and [their] family."**

***—Nurse at a large, independent Track 2 practice***

- **Clinical processes.** Several deep-dive practices changed clinical processes in response to patient and caregiver feedback. For example, practices revised patient intake forms, changed workflows to improve nurse callback times, and revised medication lists to include more generic options. Additionally, CPC+ care delivery requirement reporting data show that practices made changes to health records, and to the ways in which they coordinated with hospitals or specialists and with high-risk patients.

- **Physical features of the practice.** Several deep-dive practices reported making changes to improve the physical characteristics of their practice**,** such as improving signage; increasing availability of parking; and installing automatic door openers, handrails, and hooks for hanging personal items. One practice added mats and large plants between check-in lines at the front desk, so patients had more space and privacy. (The CPC+ care delivery reporting template did not give practices an option to indicate that they made changes to the physical features of the practice in response to patient feedback.)

**Figure 4.15. Percentage of CPC+ practices that indicated various areas of practice change influenced by patient and caregiver input, by track**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017. Practices could check multiple response options. Practices were asked to refer to all forms of patient and caregiver input, including input from PFACs, surveys, and other strategies.

ED = emergency department.

**Most CPC+ practices communicated with patients about changes made in response to feedback, but only a few deep-dive practices described mechanisms for communicating changes beyond the PFAC.** CPC+ care delivery requirement reporting data indicate that of the 78 percent of practices that reported doing something to communicate with patients about practice changes they had made, 59 percent used print materials distributed or posted in the office; 34 percent posted information on a website or patient portal/patient health record; 24 percent distributed materials outside the office via such means as newsletters, mailings, or social media; and 21 percent used another approach to share this information. Although several deep-dive practices said they reported to patient advisors during PFAC meetings on changes made in response to their feedback, only a few deep-dive practices reported strategies for communicating

feedback and outcomes to their broader patient population. Those few said they shared information via fliers or posters at their front desks or in lobbies, and one practice planned to disseminate PFAC activities and outcomes via a patient newsletter. Most deep-dive practices described informal processes for sharing feedback and outcomes (such as sharing information with patients during office visits), and a few practices reported they did not have a process for dissemination.

### What facilitators and/or challenges do CPC+ practices experience in engaging patients in practice improvements?

**Deep-dive practices' perspectives varied on the value of PFACs and surveys for engaging patients in practice improvement.** Roughly half of deep-dive practices found PFACs valuable because they provided an opportunity for practices to hear from patients about problems or challenges that the practice was unaware of or did not understand fully. Practices also noted that patients value feeling heard during the PFAC meetings and engaging in discussions directly with practitioners and other clinical and nonclinical staff about their concerns. Several practices similarly thought surveys were helpful for identifying areas for improvement and for providing positive feedback. Practices that found little value in PFACs typically thought that they repeated information found in surveys and were less representative of patient perspectives than survey data. For example, a physician at one deep-dive practice expressed concern that PFAC patient advisors were generally more satisfied with their care than typical patients. However, several other deep-dive practices questioned the value of surveys, because the patients who respond may not represent typical patients, or the results may be difficult to interpret. A few deep-dive practices were concerned about the burden surveys impose on patients.

> **"It was fun to see patients feel like they're a part of what we're doing. I liked that sense of engagement that they had in seeing that we want [them] to be a part of this committee that has a say in the direction we go."**
>
> ***—Physician at a medium-size, Track 1 practice***

**Roughly half of deep-dive practices encountered challenges with attendance at PFAC meetings.** A common difficulty was finding a meeting time that would work for PFAC patient advisors including those who work, are retired/elderly, or have young children. To overcome this challenge and attempt to gather feedback from diverse patient advisors, one deep-dive practice opted to hold daytime meetings in the winter and evening meetings in the summer. A few practices also pointed to transportation and parking problems as barriers to attendance for some patient advisors. To overcome these types of challenges, some deep-dive practices provided transportation for patient advisors, and others were exploring the possibility of conducting PFAC meetings via teleconference. A few deep-dive practices used incentives such as small cash payments, food, or goody bags to encourage attendance.

**A few deep-dive practices experienced challenges focusing meetings on actionable, practice-wide feedback, rather than on patient advisors' personal experiences.** One practice overcame this challenge by having a PFAC practice staff member redirect the group toward practice-wide topics, while another practice removed a patient advisor that it felt was dominating the conversation with personal stories. A few practices intentionally selected patient advisors who were interested in discussing practice-wide changes, which practices thought was effective in averting this type of challenge and producing constructive discussions resulting in actionable feedback.

**A few deep-dive practices wanted additional guidance on how to run a PFAC.** Despite operational guidance and examples provided in the CPC+ Implementation Guide, a few practices expressed uncertainty about how to organize a PFAC and the types of topics to discuss during PFAC meetings. For example, the medical lead from one deep-dive practice said that they were still trying to determine the optimal number of PFAC patient advisors and whether it is better to maintain the same group over time or to invite new patient advisors for each meeting. A few deep-dive practices sought input from the practice's clinical staff or from system-level staff who had experience with PFACs, or reviewed sample agendas and materials from other CPC+ practices that had already conducted PFAC meetings. A couple of deep-dive practices searched for additional guidance online.

## B. Self-management support

### What are the CPC+ requirements?

All CPC+ practices were required to assess their capabilities and plan for support of patients' self-management in the first year. Track 1 CPC Classic and Track 2 practices were also required to implement self-management support for at least three high-risk chronic conditions. Self-management support gives patients with chronic conditions tools to manage their health day to day and take an active role in their health care. The support activities focus on increasing patients' motivation, confidence, and ability to understand and manage their health.[48]

### How are CPC+ practices approaching self-management support?

**Nearly all Track 2 practices (98 percent) and Track 1 CPC Classic practices (96 percent) reported they provided self-management support.** Despite not being required to do so, most Track 1 practices that did not participate in CPC Classic also reported they provided self-management support (87 percent). For the most part, deep-dive practices indicated that they offered self-management activities to support more than three chronic conditions. Most commonly, practices reported offering self-management support for diabetes (87 percent), tobacco cessation (64 percent), and hypertension (62 percent) (Table 4.5). Deep-dive practices frequently said they focused their self-management support efforts on conditions they believed were most prevalent in their patient population, or that they considered highly responsive to patient education and compliance. Practices most commonly targeted self-management support to patients with poorly controlled disease (77 percent), who were identified or referred by a

[48] Self-management support overlaps somewhat with the work practices do using care plans to provide longitudinal care management (described in Section 4.6.2). A key component of developing a mutually agreed-upon care plan is engaging in communication to activate patients to identify strategies and implement actions to meet their own health care goals.

clinician (76 percent), or who expressed interest in such support (70 percent), according to CPC+ care delivery reporting data.

### Table 4.5. Percentage of CPC+ practices that provided self-management support for various conditions

| Condition | Overall (N = 2,785) | Track 1 Not Classic (N = 1,227) | Track 1 Classic (N = 76) | Track 2 (N = 1,476) |
|---|---|---|---|---|
| **Support for cardiovascular conditions** | | | | |
| Congestive heart failure | 53% | 47% | 45% | 58% |
| Hyperlipidemia/high cholesterol | 40% | 43% | 47% | 37% |
| Coronary artery disease | 27% | 29% | 17% | 26% |
| **Support for respiratory/pulmonary conditions** | | | | |
| Chronic obstructive pulmonary disease | 53% | 50% | 37% | 57% |
| Asthma | 34% | 40% | 22% | 30% |
| **Support for mental health conditions** | | | | |
| Depression | 46% | 44% | 32% | 48% |
| **Support for substance misuse conditions** | | | | |
| Tobacco cessation | 64% | 66% | 50% | 64% |
| Alcohol misuse | 22% | 27% | 18% | 18% |
| Opioid misuse | 18% | 21% | 15% | 15% |
| **Support for other conditions** | | | | |
| Diabetes | 87% | 80% | 92% | 92% |
| Hypertension | 62% | 60% | 70% | 63% |
| Obesity/weight loss | 50% | 54% | 50% | 46% |
| Chronic pain | 23% | 23% | 18% | 19% |
| Other | 11% | 8% | 11% | 14% |
| **Did not select any conditions for self-management support** | **7%** | **13%** | **4%** | **2%** |

Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017. If practices selected, "We did not select any conditions for self-management support," they could not select the other options for this question.

**Few deep-dive practices reported that they assessed their capability to support patients' self-management** (perhaps in part because most were already offering self-management support before CPC+). However, a few deep-dive practices reported conducting formal assessments of their self-management support activities. For example, one practice had assessed capabilities and identified opportunities for improvement to support self-management through a medical home readiness assessment before CPC+.

**Several deep-dive practices reported efforts to build capacity for self-management support by hiring new staff or training existing staff:**

- **Hiring new staff.** Several practices noted that specialized staff (such as care coordinators, care managers, social workers, nurses, pharmacists, dietitians, and behavioral health providers) hired as a result of CPC+ participation or unrelated hiring efforts enabled them to provide new or enhanced self-management support to patients. Several other practices said they wanted to add such specialized staff to bolster self-management support.

- **Training existing staff.** Several deep-dive practices said that skills in motivational interviewing, teach-back techniques, proactive listening, and facilitation were key to supporting patients' self-management, and about half of these practices had trained practitioners and clinical and nonclinical staff to develop these types of skills.

**Deep-dive practices used a variety of strategies to provide self-management support to patients including teaching condition-specific skills, collaboratively setting goals, and providing on-site educational classes.** Most practices distributed patient education materials and taught condition-specific skills, such as meal planning, injecting insulin, and taking blood pressure. These practices typically took what one medical lead described as an "intuitive" approach to self-management support, in which practitioners talked to patients about what they wanted for their health and helped them set realistic goals and plans to achieve them. Roughly half of deep-dive practices reported collaboratively setting goals with patients. Practices noted using motivational interviewing techniques and tools based on evidence-based guidelines, including structured educational materials and other resources, to help patients define goals and next steps for self-management and/or develop formal action plans. Practices used various terms when referring to evidence-based tools, including action plans, care plans, patient plans, care packages, and toolkits.[49] In addition, several deep-dive practices provided on-site self-management support educational classes. All of the practices that offered group education classes did so for patients with diabetes, and some offered classes on other topics, such as weight loss and tobacco cessation. The format of the classes varied from one to multiple sessions, and the leaders varied from practitioners employed by the practice to staff from community partners.

**"We're asking patients to think about what they can do to mitigate their symptoms."**

***—Care coordinator at a system-owned Track 1 practice***

**Moreover, roughly half of deep-dive practices referred patients to outside resources for in-depth or specialized self-management support.** Although practices of all types linked patients to community supports, system-owned practices commonly referred patients to resources offered through their affiliated health system, such as diabetic and other chronic condition education programs, diabetic educators, dietitians, and specialists.

[49] In this context, CMS defines a "tool" as a resource used directly with and/or given to patients to support their self-management, whereas a "toolkit" is a resource typically targeting providers, practices, or systems to help them implement a change or use a tool with patients (CMMI 2017).

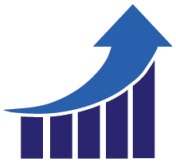
### What facilitators and/or challenges do CPC+ practices experience in providing self-management support?

**Roughly half of deep-dive practices reported that having clinical and nonclinical staff with time to meet with patients, build collaborative relationships, and learn about patients' obstacles to managing their health helped them provide self-management support.** For example, one practitioner noted that structuring her practice to allow 30 to 40 minutes with each patient allowed her to "get to know the aspects of their daily life that affect their ability to self-manage." Many practices noted that having specialized staff (such as care coordinators, care managers, social workers, nurses, pharmacists, dietitians, and behavioral health providers) who could spend dedicated time with patients—in addition to the time patients spent with their primary practitioners—was key to providing self-management support. Correspondingly, several practices noted that the most common barrier to self-management support was insufficient time for practice team members to explore and support patients' self-care during office visits.

**Many deep-dive practices noted that features of their EHRs supported self-management support.** Several of these practices said that their EHRs helped them identify patients who needed self-management support, through the registry function or other EHR features that supported identifying patients with specific needs. Practices used EHRs to document patients' goals and practitioner–patient interactions, track patients' progress toward their goals, share information with other members of the care team, flag topics for future visits, and engage in teach-back strategies with patients. EHRs also housed educational materials and tools (such as blood sugar or food logs) that practitioners could select as a "treatment" and then print and share with patients. Finally, several practices described having specific self-management functionality built into their EHR. For example, a couple of practices described goal-setting tools in their EHRs. At one practice, medical assistants bringing patients into exam rooms followed EHR prompts to help patients with diabetes, hypertension, chronic obstructive pulmonary disease, and asthma begin to define their self-management goals. Clinical staff then reviewed the goals with patients during initial and follow-up visits.

**Roughly half of deep-dive practices struggled to activate and motivate patients to engage in self-management support.** Several deep-dive practices said that patients' lack of motivation, interest, or willingness to change behaviors hindered their efforts to promote self-management. Several deep-dive practices also said that patients' fear of associated costs and costs not covered by insurance (such as for diabetic education group classes, nutritional counseling, or suggested foods) prevented them from adhering to recommended interventions. A couple of deep-dive practices said that engaging elderly patients in self-management support is particularly challenging, because these patients often have difficulty understanding complex directions or accessing online resources.

### 4.6.5. Function 5: Planned care and population health



CPC+ encourages practices to organize health care delivery to meet the needs of their entire patient population. This approach to health care delivery, referred to as "planned care and population health" in CPC+, calls for practices to use data and team-based care to proactively and efficiently manage care for empaneled patients. Regular use of eCQM and payer feedback data (Section A) is intended to support practices' efforts to identify gaps in care for the patient population and select high priority areas for quality improvement. A team-based approach (Section B) is intended to enhance practices' capacity to improve the quality of care provided to their patient population by using the skills and abilities of everyone on the team, rather than relying on a single practitioner to deliver care. It also helps practices build an infrastructure and foster a culture centered on QI driven by data. CPC+ expects that within a culture centered on improvement, care teams will meet regularly to review population health data, set goals with measurable outcomes, and use data to guide and test strategies to improve the quality of care at both the practice and panel levels (CMMI 2017).

#### A. Using payer feedback and eCQM data to proactively manage and improve population health

**What are the requirements?**

CMS encouraged practices to use data to proactively manage population health. To inform population health QI efforts, all practices were required to use (1) data feedback provided by CMS and other payers at least quarterly on at least two utilization measures at the practice level and (2) data on at least three eCQMs, derived from their EHRs, at the practice and panel levels.

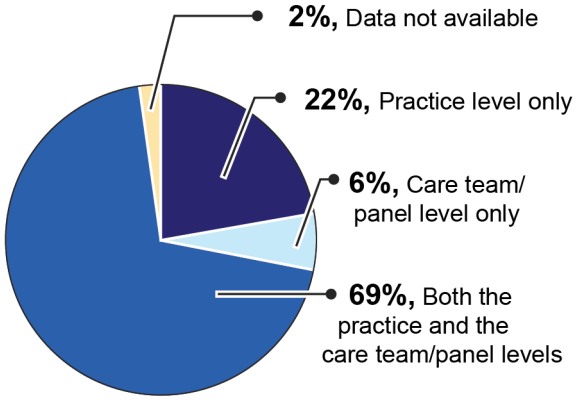
In addition to the CPC+ care delivery requirements related to the five Comprehensive Primary Care Functions (see Section 4.2), CMS required practices to report at least 9 of the 14 CPC+ eCQMs in the measure set for the 2017 performance period. CMS uses CPC+ practices' performance on eCQMs, as well as patient experience and utilization measures, to calculate performance-based payments for CPC+ practices not participating in SSP. (Chapter 3 provides additional information on CMS' performance-based payment approach and about the data feedback provided to CPC+ practices by CMS and other payers, how practices used the data feedback, and the limitations of that data feedback.)

**How are CPC+ practices using eCQM and payer feedback data to proactively manage and improve population health?**

**Nearly all practices had access to utilization data from multiple sources.** All practices received feedback data from CMS that displayed at least two utilization measures at the practice level. Most deep-dive practices also reported access to data feedback containing utilization measures from other payers or health systems. (Chapter 3, Section 3.4 provides additional information about data feedback availability.)

**Nearly all practices had access to eCQM data, though only a few deep-dive practices reported having dashboards in their EHR that enabled them to monitor real-time eCQM data.** CPC+ care delivery requirement reporting data indicate that nearly all practices had access to eCQM data (98 percent). Only 69 percent of practices had access to eCQM data at both the practice and panel levels, even though CPC+ requires it (Figure 4.16).[50]

**Figure 4.16. Percentage of CPC+ practices reporting that eCQM data are available at various levels**




Source: Mathematica's analysis of 2017 (Q4) Care Delivery Requirement reporting data from the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017.

**Nearly all practices met or exceeded the CPC+ requirement to review eCQM data at least quarterly.** Only 4 percent of practices reviewed data less than quarterly, and more than two-thirds (70 percent) of practices reviewed eCQM data more frequently than required. Track 2 practices tended to review data more regularly than Track 1 practices, with 75 percent compared with 65 percent of practices, respectively, reviewing data weekly or monthly. Deep-dive practices used various strategies to review eCQM data with staff, including email, individual and group meetings, and posters in common areas highlighting eCQM performance. (See Chapter 3.4 for information on the frequency with which practices reviewed payer feedback.)

**In the first year, many deep-dive practices picked measures for the focus of their QI efforts that already fit well with their existing workflows and the perceived needs of their patient population.** The eCQMs practices most commonly selected for QI were Diabetes: Hemoglobin A1c Poor Control, Colorectal Cancer Screening, and Breast Cancer Screening; each of these measures was selected by more than 80 percent of practices (Table 4.6). Participation in other programs or initiatives, including SSP and other Accountable Care Organizations (ACOs), PCMH programs, meaningful use, and other physician compensation/incentive programs helped practices of all types develop eCQM monitoring capacity before their participation in CPC+. As a result, most deep-dive practices monitored population-level data before CPC+ and were tracking more eCQMs than required (in several cases, more than 15) during CPC+. In 2017, practices were required to select three measures to focus on for QI, and select nine of 14 eCQMs to report to CMS. A couple of practices noted that tracking more measures than what was required allowed them to get a broad view of the practice's performance and to select and report on the subset of those measures that demonstrated the most improvement (thus increasing the likelihood that they surpassed benchmarks needed to receive payments based on eCQM performance). Relatedly, a few practitioners at deep-dive practices noted that the measures

[50] "Panel level" refers to data being available at the practitioner/care team level. (The panel is all patients empaneled to a particular practitioner/care team.)

selected for improvement efforts were influenced in part by their perceptions about how easy it would be for the practice to influence the measure. A few practices rotated the eCQMs on which they focused for these QI efforts, such as identifying a "measure of the month." Table 4.6 lists the eCQMs that CPC+ practices selected to report to CMS and those that practices focused on for QI efforts.

### Table 4.6. Percentage of practices that reported an eCQM to CMS, and that selected to focus QI efforts on an eCQM in 2017

| eCQMs | (1) Reporting on each eCQM to CMS (N = 2,743) | (2) Focusing on each eCQM for QI (N = 2,785) |
|---|---|---|
| Diabetes: Hemoglobin HbA1c Poor Control (>9%) | 100% | 83% |
| Colorectal Cancer Screening | 99% | 85% |
| Breast Cancer Screening | 99% | 81% |
| Controlling High Blood Pressure | 99% | 74% |
| Falls: Screening for Future Falls Risk | 98% | 69% |
| Screening for Tobacco Use and Cessation Intervention | 95% | 58% |
| Cervical Cancer Screening | 83% | 54% |
| Use of Imaging Studies for Low Back Pain | 76% | 26% |
| Diabetes: Eye Exam | 72% | 67% |
| Dementia: Cognitive Assessment | 56% | 30% |
| Closing the Referral Loop: Receipt of Specialist Report | 53% | 33% |
| Depression Remission at 12 Months | 39% | 19% |
| Initiation and Engagement of Alcohol and Other Drug Dependence Treatment | 26% | 7% |

Source: Data for Column 1: Mathematica's analysis of the CPC+ 2017 electronic clinical quality measure (eCQM) data, as reported to CMS by practices and current as of July 2018, and limited to the eight eCQMs that more than half of practices said were targets for quality improvement in the CPC+ care delivery requirement reporting data.

Data for Column 2: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Notes: Data are not final because they do not incorporate all revisions to reporting status following CMS audit of the submitted data. Specifically, the data here incorporate the initial round of audit determinations but not resolution of any practice disputes over audit status.

Percentages reported in Column 1 are based on the 2,743 practices that reported eCQM data; this number excludes 63 CPC+ practices that failed to report sufficient eCQM data—for example, either because they submitted no data, submitted data only for a subset of the required measures, or were identified by the CMS eCQM auditor as needing learning supports to improve data quality and submission.

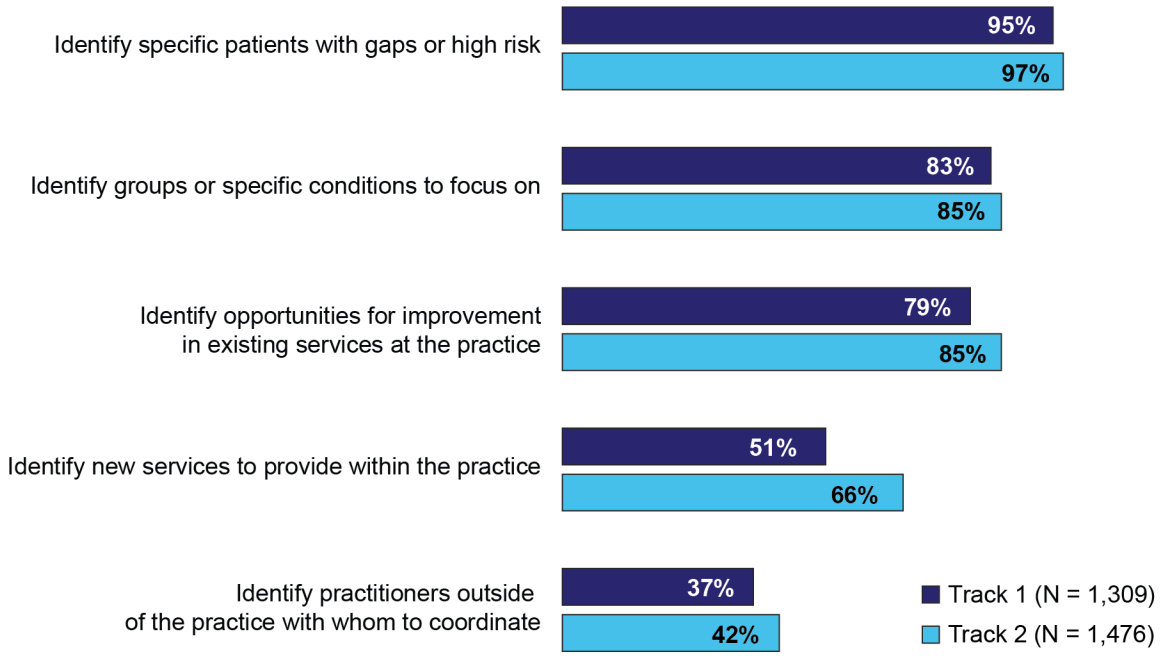
Percentages reported in Column 2 are based on the 2,785 practices that submitted CPC+ care delivery reporting data for the fourth quarter of 2017.

**Nearly all practices indicated that they are using CMS and other feedback and eCQM data to improve quality at the point of care for individual patients and to inform practice-level QI efforts.** Most commonly, CPC+ practices reported using data to identify patients with "gaps or high risk" (Figure 4.17). Roughly half of the deep-dive practices said that they used reports—often referred to as "gap lists"—produced from disease registries, EHRs, or other sources. To improve population health and eCQM performance, staff reached out to patients on these lists by phone, mail, or email to alert them of services due; some practices conducted this outreach regularly, while others did so on an ad hoc basis. Practices also commonly used data to identify groups or conditions for the practice to focus on or opportunities for improvement in existing services at the practice. Track 2 practices were more likely than those in Track 1 to use data to identify new services to provide within the practice. (Chapter 3, Section 3.4 provides additional information on how practices used data feedback to make changes to care delivery.)

**"A couple of RNs used to look at quality metrics related only to certain contracts and would make a mad dash [to improve rates] at the end of the year… but now it's something we do every day. It's now a formal part of our chart prep, which is huge… So, I think CPC+ has given us a path and a focus, and it's tangible, and it's measurable, and it makes a difference."**

***—Practice manager at a large, system-owned Track 2 practice***

**Figure 4.17. Percentage of CPC+ practices using data for various QI purposes**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017.

### What facilitators and/or challenges do CPC+ practices experience in using eCQM and payer feedback data to proactively manage and improve population health?

**Many deep-dive practices perceived value in tracking and reporting eCQMs.** Practitioners from several practices, for example, noted that increased focus on eCQMs helped staff more consistently screen and educate patients. A few practices also reported that monitoring eCQMs focused staff's attention on areas for overall improvement.

**Roughly half of deep-dive practices reported that they believed measures in payer data feedback or eCQM reports were inaccurately or unfairly calculated, indicating a barrier to using the data to drive QI.** These practices raised concerns with:

- **Measure specifications.** Several practices reported, for example, that they believed that more patients were counted in the denominator to determine their score for some measures than was useful for QI—such as, patients who were seen at the practice during the measurement period but had since left the practice or died.

- **Incomplete EHR documentation by practice members.** Staff at several deep-dive practices noted that their EHRs were not set up intuitively to capture eCQM data and that data entry was cumbersome. For example, staff in one deep-dive practice reported that they must enter patients' hemoglobin A1c values in three distinct fields for the eCQM report to capture the data. To address this challenge, several practices conducted data entry training to ensure that practitioners understood how to document data for eCQMs. Further, a few practices implemented practitioner compensation programs that tracked performance on a subset of eCQMs to determine practitioner bonuses. These practices noted that bonus programs motivated practitioners to improve the quality of the care they provided and raised their awareness about the importance of accurately documenting data in the EHR to get credit for the services they delivered. Although deep-dive practices' experiences with these challenges did not systematically differ by practice characteristics, the use of trainings and compensation programs were more common in system-owned deep-dive practices than in independent deep-dive practices.

- **Missing follow-up data from some providers outside the practice.** Many deep-dive practices struggled to obtain follow-up data from providers outside the practice. Practices reported that staff spent considerable time following up with external providers to track down reports to "receive credit" for services patients received. Several deep-dive practices noted that their performance on measures was artificially low due to poor communication with specialists and external providers; many patients had received necessary testing, for example, but consistently appeared on gap-in-care lists, because providers failed to send the necessary documentation. A few system-owned deep-dive practices reported that system-level staff provided valuable assistance with these follow-up efforts.

- **EHRs inaccurately calculating eCQMs.** In several other cases, practices reported that their EHRs did not calculate measures according to the specifications for eCQM measures by, for example, not correctly applying exclusion criteria. For example, one practice reported that mammogram gap lists generated through the EHR included patients with bilateral mastectomies and other exclusion criteria. When EHRs inaccurately calculated eCQMs, practices were required to manually reconcile errors, which both independent and system-

owned practices reported as burdensome. A few practices worked directly with their EHR vendor or external consultants, or leveraged systems-level health IT staff to coordinate solutions to health IT-related challenges. These practices, however, commonly reported that their vendors were slow to respond to these issues.

**Health IT vendor insights: New CPC+ eCQM reporting dashboards**

Most of the 13 health IT vendors that we interviewed developed new electronic clinical quality measure (eCQM) reporting templates and tracking dashboards for CPC+ in 2017, with many indicating that they can customize the way they look at measures by selecting which measures display on the dashboard and by running reports at different levels (such as by practice or practitioner). Several vendors that developed new functionalities to meet CPC+ eCQM reporting requirements made their tools available for an additional charge through add-on products. Other vendors incorporated new tools into their existing products and made them available at no additional charge.

Whereas a few deep-dive practices reported that they worked with their vendors to develop eCQM-related functionality and were happy with product enhancements, others continue to face challenges. For instance, 31 percent of CPC+ practices reported in 2017 that they lacked the ability to view eCQM results at different levels. These practices may work with smaller vendors that had not yet developed eCQM templates, be unaware of newly developed templates, or may have decided not to purchase them. Additionally, several deep-dive practices noted that their EHRs were still not set up intuitively to capture eCQM data and that generating reports was burdensome. To further address this challenge, a few vendors indicated that they were developing preset queries that would make CPC+ eCQM reporting less time-consuming.

**In addition to data accuracy, practices reported challenges with the timeliness and usability of data feedback from CMS and other payers.** A couple of practices that participated in CPC Classic thought that CMS' CPC+ data feedback was more accurate and user friendly than the CPC Classic version. Still, several deep-dive practices noted challenges using the Medicare FFS CPC+ feedback data. (Chapter 3, Section 3.4 provides additional information on challenges related to CMS and other payer data feedback.)

**Practitioners at several deep-dive practices described challenges with patients not adhering to their recommendations.** Several practitioners said they do not have control over patients' personal choices and felt that they were wasting time repeatedly contacting these patients about services due. Respondents felt that it was unfair that these patients remained in the denominators for determining performance on eCQMs and CMS and other payer data feedback because there was not much they could do to encourage adherence when patients refused care.

**"It's a lot of pressure on us to get all this preventive stuff done and [the patients] are not compliant. What do they want us to do? It's not our fault."**

***—Practice manager at a small, system-owned Track 2 practice***

## B. Using a team-based approach and care team meetings to review data and guide improvements in population health

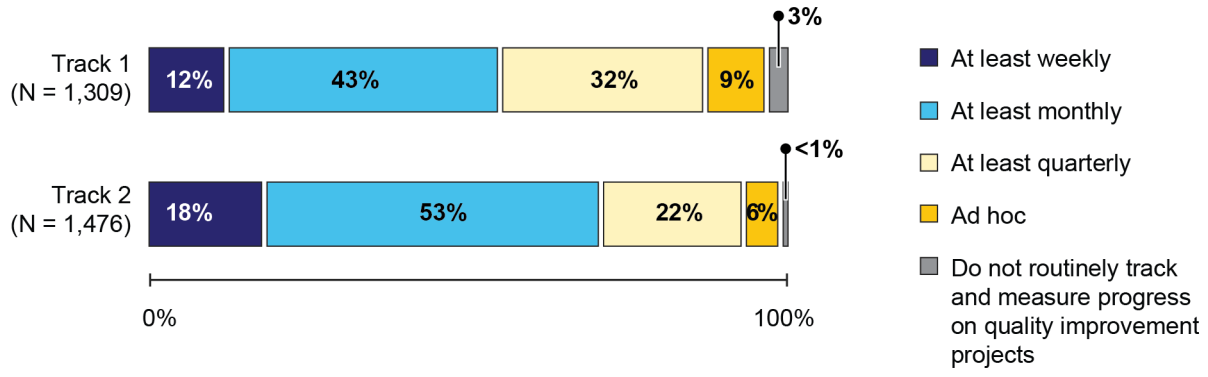
### What are the requirements?

CMS required Track 2 practices to conduct care team meetings at least weekly to review practice- and panel-level data feedback from CMS and other payers and from internal monitoring (for example, eCQMs and registry reports), and to use these data to guide and test tactics to improve health care quality and achieve CPC+ practice goals. Practices were urged to use a team-based approach for population health management, based on evidence that care teams provide the infrastructure and foster a culture that centers on QI. CMS expects that within a culture of improvement, practice teams will meet regularly to review population health data, set goals with measurable outcomes, and use data to guide their improvement work. CMS also expects that developing a culture of improvement will empower and prepare practitioners and both clinical and non-clinical staff to take on new roles; encourage practitioners to delegate tasks done better or more efficiently to others; and thus, improve practices' ability to provide high quality care to their entire patient population. (See Section 4.6.1 for a description of care teams.)

### How are CPC+ practices using a team-based approach and care team meetings to review data and guide improvements in population health?

**Although most practices convened regular care team meetings to review data, few Track 2 practices met the CPC+ requirement to hold these meetings at least weekly.** CPC+ care delivery requirement reporting data indicate that only 18 percent of Track 2 practices held care team meetings at least weekly in 2017 even though CPC+ required them to do so. In fact, Track 1 practices were nearly as likely to meet weekly as those in Track 2, despite not being required to do so (Figure 4.18). Roughly half of Track 2 practices reported that they held care team meetings at least monthly (53 percent); the rest reported that they did so either at least quarterly (22 percent) or on an ad hoc basis (5 percent). Larger deep-dive practices were slightly more likely to hold weekly data-focused care team meetings than smaller ones.

**Figure 4.18. Percentage of CPC+ practices reporting that they hold care team meetings to track and measure progress on QI projects, by frequency**




Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017.

**Care team meetings to review data typically consisted of (1) reviewing and comparing data with the practice's quality goals and (2) identifying opportunities for improvement.** Before CPC+, many Track 2 deep-dive practices held meetings during which data were discussed, and practices said the focus on data at the care team level increased during CPC+. Among deep-dive practices, care team meetings commonly included a review of panel- and patient-level data to identify gaps in care that affect eCQMs, frequent users of the hospital or ED, or other high-risk patients who might benefit from care management. The meetings also provided an opportunity to, in the words of one practitioner, "cheer on" staff when goals were met and to address challenges when they were not meeting their goals. Care team meetings in deep-dive practices often included troubleshooting on issues related to division of labor, teamwork, and workflows to improve performance on quality measures. Common examples of issues discussed included how to document and track information in the EHR, determining whether pre-visit planning was being conducted consistently, and identifying other ways the practice could proactively manage groups of patients. A couple of the deep-dive practices indicated that they hold weekly meetings with their care teams focused on reviewing data and less frequent meetings (typically monthly or quarterly) with the whole practice and/or separate meetings for practitioners and staff to introduce them to CPC+ QI goals and performance data and to invite them to participate in QI projects. These larger group meetings also provide an opportunity for practitioners and staff to voice concerns about workload, workflow, and other issues.

> **"We make decisions. We then implement them. Then, we meet. We see what works, see what doesn't work... We listen to feedback. Did we accidently put too much on somebody? Did we burden somebody with 14 steps that could have been done in 2? We listen to ideas of the people that are performing those specific roles."**
>
> ***—Office manager at a medium-size, system-owned Track 2 practice***

**Clinical and administrative leaders most often generated and implemented QI ideas but were often working alongside others in the practice.** Specifically, 83 percent of practices reported in their CPC+ care delivery requirement reporting data that clinical and administrative leadership were primarily generating improvement ideas and opportunities, and 71 percent of practices reported that clinical and administrative leadership implemented QI projects (Table 4.7). Practices also reported that care teams, clinical staff, and designated QI teams commonly generated QI ideas and implemented projects. Although similar percentages of practices in both tracks reported that clinical and administrative leadership, care teams and clinical staff, non-clinical staff, and patients and caregivers are generating and implementing QI ideas, more Track 2 than Track 1 practices involved designated QI teams in the generation of QI ideas and the implementation of QI projects.

### Table 4.7. Percentage of practices reporting that various individuals generate and implement QI ideas

| | Overall (N = 2,785) | Track 1 (N = 1,309) | Track 2 (N = 1,476) |
|---|---|---|---|
| **Roles of individuals who primarily generated QI ideas and opportunities over the last two quarters** | | | |
| Clinical and administrative leadership | 83% | 80% | 86% |
| Care teams and clinical staff | 60% | 59% | 62% |
| Designated QI team[a] | 47% | 41% | 53% |
| Non-clinical staff | 29% | 27% | 31% |
| Patients/caregivers | 25% | 20% | 29% |
| Did not generate QI ideas | <1% | <1% | <1% |
| **Practice staff who had implemented QI projects or tests of change over the last two quarters** | | | |
| Clinical and administrative leadership | 71% | 70% | 72% |
| Care teams and clinical staff | 68% | 64% | 71% |
| Designated QI team[a] | 45% | 39% | 49% |
| Non-clinical staff | 33% | 32% | 34% |
| Patients/caregivers | 4% | 4% | 5% |
| Did not implement QI projects or tests of change | 2% | 3% | 1% |

Source: Mathematica's analysis of 2017 (Q4) care delivery reporting data submitted by practices to CMS via the CPC+ Practice Portal.

Note: Percentages are based on the 2,785 practices that submitted data for the fourth quarter of 2017. Practices could check multiple response options.

[a] QI team refers to a group of people within the practice who meet regularly and are devoted to QI efforts.

QI = quality improvement.

**In addition to data-focused meetings, many practices used other team-based strategies to promote population health management.** CMS encouraged practices to use these strategies but did not require them to do so. They included:

- **Care team huddles.** CPC+ care delivery requirement reporting data indicate that 74 percent of Track 2 and 61 percent of Track 1 practices reported that their care teams used structured pre-visit huddles to communicate. Many practices (62 percent) used pre-visit huddles daily (38 percent of practices used them less regularly). Although huddle formats and attendees varied by practices, most deep-dive practices described huddles as opportunities to help care teams establish shared patient goals. In contrast, a couple of deep-dive practices reported that huddles were time-consuming and unproductive and preferred to plan patients' care using ad hoc conversations and EHR messaging throughout the day.

- **Scheduled care team meetings.** Sixty-two percent of Track 2 and 50 percent of Track 1 practices used scheduled care team meetings to discuss high-risk patients and planned care. Few practices (10 percent) used structured care team meetings daily (90 percent of practices used them less regularly).

- **Formalizing pre-visit planning activities.** Many deep-dive practices described other pre-visit planning activities, and several practices said that pre-visit planning activities had become more thorough and routine since CPC+. Many practices, for example, said that they prepared for patient visits a few days before they occurred. Staff, typically medical assistants, but also practice managers, care managers, population health staff, and practitioners, reviewed the patient charts (usually using the EHR) to see what tests had been done since the last visit, tracked down results or discharge summaries from hospitals or post-acute care providers, and determined which tests needed to be done.

> **"Prior to CPC+, it was just the medical assistants would room the patients, grab their blood pressure, get their vitals, and that was it. There wasn't a lot of discussion of, all right, Bob's coming in, we need to make sure he's got his A1C. He hasn't had his cholesterol taken in a while. Now [with CPC+], more of those conversations are happening."**
>
> ***—Practice manager at a large, independent Track 2 practice***

- **Creating new staff roles focused on population health.** Many deep-dive practices, particularly larger ones, added new staff roles to support population health, including care managers, behavioral health staff, QI/population health staff, and data analysts, as well as additional medical assistants and nurses. Many practices also increasingly placed staff in dedicated population health roles to increase accountability and improve the efficiency of this work. Population health/QI staff, for example, were responsible for (1) running reports (at the practice or practitioner level) that practices used in huddles and pre-visit planning efforts to identify gaps in care and (2) tracking down records or results for patients who had been seen outside of the practice or system.

- **Structuring care teams so staff "worked at the top of their licenses."** To improve practice efficiency, ensure patients received needed services, and reduce burden on practitioners, several deep-dive practices also trained non-practitioners (especially medical assistants) to set up the orders for routine standard screenings and other services, which practitioners would then approve, and a couple of deep-dive practices reported having standing orders in place. Track 2 and large deep-dive practices focused more on training medical assistants and other support staff to "work at the top of their licenses" and take on population health tasks compared with Track 1 deep-dive practices and deep-dive practices with fewer practitioners.

### What facilitators and/or challenges do CPC+ practices experience in using a team-based approach and care team meetings to review data and guide improvements in population health?

**Having a designated leader facilitated engagement and productivity during care team meetings to review data.** Leaders included practitioners, care managers, practice managers, and nurses. Practice managers typically led the practice-level meetings but also assisted staff with protocols for reviewing data and liaised among the separate care teams' meetings to identify issues germane to the practice as a whole. A couple of deep-dive practices reported that having practitioners lead the care team meetings boosted buy-in and participation among both practitioners and staff.

**Deep-dive practices' opinion of the value of care team meetings to review data was mixed.** On the positive side, several Track 2 deep-dive practices said that data-focused care team meetings helped convey information to practitioners and staff about practices' performance, address gaps in care in a timely manner, and encourage staff to focus on delivering high quality care. For example, showing practitioners and care teams data about how they were performing on quality metrics with their patient panels relative to other practitioners, care teams, and practices (for those in systems) boosted accountability and motivation to improve. A couple of deep-dive practices preferred holding practice-level meetings, as opposed to care team meetings, citing that practice-level meetings fostered learning across a broader group of staff and enabled staff to "feed off each other" by sharing experiences. When data signaled issues with a practitioner, one deep-dive practice reported that targeted interactions were more effective than group meetings. Additionally, a few deep-dive practices reported that time constraints hindered their ability to meet every week. Practitioners were especially hesitant to set aside time for care team meetings, citing that they frequently used other approaches to communicate about data or did not receive new data weekly to discuss. Track 1 deep-dive practices expressed more skepticism than Track 2 deep-dive practices about the usefulness of data meetings.

## 4.7. Cross-cutting factors influencing practice transformation and implications for CPC+ in future years

In this section, we highlight the major cross-cutting factors that supported or hindered CPC+ practices' transformation work in 2017. We also note implications of these findings for future years of CPC+; we highlight these implications with a lightbulb icon.

### 4.7.1. Factors that supported CPC+ implementation

In 2017, the following factors helped support CPC+ practices' work:

- **Prior transformation experience.** Deep-dive practices with prior primary care transformation experience noted that this foundation enabled them to implement CPC+ care delivery requirements more systematically across the five functions. For example, according to practices that previously participated in a PCMH program, that earlier work created a strong foundation for strategies they further developed in CPC+, particularly in care management and care coordination. Many practices with previous work on care transitions noted that their experience enhanced CPC+ work on episodic care management. Practices that had done QI work using eCQMs, as well as those with staff who already focused on population health, noted that their experience helped them develop strategies to improve population health management. On the other hand, practices without experience in PCMH models or other transformation efforts were still hiring new staff, such as care managers for the care management function and clinical social workers or psychologists for behavioral health integration, at the end of 2017.

- **Having a designated CPC+ leader.** Practices that had someone at the practice level who championed CPC+, as well as designated leaders for specific CPC+ activities such as using data to drive QI, found implementation of CPC+ requirements more manageable.

- **A practice culture that embraced CPC+ concepts.** Deep-dive practices with a culture that (1) embraced the comprehensive role of primary care, (2) promoted good working relationships among staff and practitioners, and (3) enabled team members to speak openly about problems, also seemed to have an easier time implementing CPC+ requirements.

- **A team-based approach to care.** Using a team-based care approach was a common facilitator to CPC+ implementation, and staff reported that participating in CPC+ improved trust and communication among practice staff. Most deep-dive practices held regular meetings, sent instant messages through their EHR, and used daily huddles to communicate about patient needs. Additionally, practices presented and reviewed data with staff to foster commitment to improving quality measures. These efforts built practice-wide and care team trust, validated staff as stakeholders in practice change, supported care team members in using their full skill set, and supported practitioners' efforts to consult with one another on patients with complex needs before referring them to specialists.

- **Robust health IT features and functionalities.** Deep-dive practices with robust EHR functionality and related health IT identified these factors as key facilitators of CPC+-related work, whereas practices without these factors reported implementation challenges. Having robust health IT functionalities influenced practices' ability to implement each of the five functions. For example, practices listed their patients' assigned primary care practitioner within their EHR and used the system to run reports on their empanelment progress. Additionally, practitioners reported that having remote access to their EHR allowed them to respond to patients' needs 24/7, and aided timely and accurate documentation after hours. EHRs also helped practices automate risk stratification by using algorithms for assigning risk scores. EHR templates facilitated care management by automatically populating care plan data in patients' charts. Health IT also helped practices identify care gaps, create registries, and monitor eCQMs. Several deep-dive practices created dashboards within their EHR to display quality measures they were targeting.

- **Access to resources and supports from a larger health care organization.** System-owned deep-dive practices tended to have greater access to resources to support CPC+ implementation than independent practices; independent practices often added new responsibilities to the roles of existing staff and practitioners. System-owned practices often had greater access to staffing resources for care management and behavioral health integration, data analytics capabilities and QI resources, and a network of secondary and tertiary care providers who were part of their system. System practices also reported that they could use health IT to easily access and exchange data from specialists, EDs, and hospitals within their system. In contrast, independent practices struggled with more complex and technical requirements due to resource limitations. Some small, independent deep-dive practices did not hire a new care manager due to limited funding and/or a small number of high-risk patients; instead, (already burdened) nurses, medical assistants, and practitioners took on the care manager role. Further, resource limitations hindered a few independent practices from updating their EHRs. As a result, many of these practices used Excel files and manual processes to track gaps in care and ED and hospital visits.

Practices that lack one or more of these facilitating factors—such as prior experience with primary care transformation and/or team-based care, sophisticated health IT, or health system resources—may need more support or creative ideas about identifying and using resources to implement CPC+ changes.

### 4.7.2. Factors that hindered implementation

In 2017, the following factors hindered CPC+ implementation:

- **Lack of understanding of the care delivery requirements.** Practices varied in their level of understanding of care delivery requirements in the first year of CPC+. For example, during deep-dive interviews, practitioners often conflated "care plans" as envisioned by the CPC+ Implementation Guide with after-visit summaries, progress notes, and condition-specific action plans for patients.

Such misunderstandings suggest there is a risk that the CPC+ care delivery reporting data (which are used to monitor compliance with program requirements and identify practices needing extra support) may overstate the extent to which practices are meeting care delivery requirements.

- **Perception that some care delivery requirements were not beneficial.** Most deep-dive practices reported that they implemented particular care delivery requirements such as risk stratification; care plan use; and identification of high-cost, high-volume specialists. However, practitioners at several deep-dive practices felt that some requirements forced a "one-size-fits-all" approach to care that interfered with clinical judgment and did not add to the quality of care, so they had not fully implemented these activities. For example, a few deep-dive practices that understood the requirements well said a pre-determined risk stratification algorithm did not work for them, because they were unable to define clinical criteria for categorizing patients' risk status, and preferred to rely on their personal knowledge of their patients. Similarly, some practitioners understood what CMS was asking of them regarding care plans, but they felt care plans were not helpful because (1) the information already existed in progress notes or post-visit summaries, or (2) they knew their patients well enough that they and their patients did not need a care plan. Further, it was common for physicians to consider their choice of specialists for referrals as a "practitioner-specific decisions," and to report that they did not need data identifying high-cost, high-volume specialists to guide them.

A stronger evidence-based case needs to be made as to why and how the care delivery requirements will improve patient outcomes, beyond practices' current approaches to primary care.

- **Limited EHR functionality and poor interoperability.** Practices without robust EHR functionalities or interoperability faced challenges to implementing the CPC+ functions. This finding was particularly true for risk stratification, creating care plans and sharing them across team members, and reporting eCQMs, which practices found burdensome. System-owned practices typically had access to information from other providers within their system, but independent practices had more limited access to and ability to exchange information with other providers, including outside specialists and hospitals.

CPC+ practices, particularly independent practices, need more support from EHR vendors to develop and/or start to use EHR functionalities necessary to carry out the care delivery requirements. Additionally, practices need more support for interoperability, via a national or state infrastructure, if they are going to be required to exchange information electronically with providers outside their organizations.

- **Difficulty integrating care managers into the practice.** Care managers in some deep-dive practices reported that they felt overwhelmed with multiple responsibilities and large caseloads of higher risk patients (such as those with recent hospitalizations). In other practices, care managers newly hired for CPC+ often felt that they were underutilized and their roles were unclear, especially in practices that had not previously participated in CPC Classic or a medical home initiative. In these practices, practitioners tended to preserve care management responsibilities for themselves and were slowly adjusting to sharing responsibility for their patients with the care manager.

Practices that had not previously worked with care managers, and practices with care managers who felt overwhelmed, could benefit from targeted learning support to refine care management roles and to manage the expectations of other practice members for care manager activities. In addition, integrating care managers into the care team will require continued efforts to gain practitioners' buy-in to the care manager role. These activities would help effectively integrate the care manager role into primary care practices while avoiding overwhelming care managers or missing opportunities to optimize patient care.

- **Challenges engaging patients in CPC+ efforts.** Many practices reported that they struggled to motivate some patients to engage in care planning and self-management efforts, and to use health care resources such as 24/7 access, patient portals, EDs and hospitals, and specialists appropriately. Practices also said that some patients resisted care management services, follow-up calls, and self-management support because they feared they would incur out-of-pocket expenses or felt inundated with medical information from multiple sources. Practices expressed concern that patients' lack of motivation, interest, or willingness to change behaviors, adhere to treatment recommendations, or set health goals resulted in barriers to successful care management. Practices also felt that it was unfair to include patients who did not adhere to recommendations when determining performance on eCQMs, because practices could do little to encourage adherence among patients who refused care.

Practices need more capacity to engage patients in managing their own health and to allay patients' concerns related to costs and other factors. CMS and the National Learning Team and Regional Learning Network could consider offering additional learning activities aimed at developing this capacity, including approaches to assess patient motivation, motivational interviewing skills, and other patient engagement techniques.

- **Supports that are inadequate or difficult to use.** Although support for CPC+ practices was substantial in 2017, some practices indicated they needed additional funding and/or more guidance from payers and vendors. In Chapter 3, we describe how practices perceived of and used enhanced and alternative payments, data feedback, learning activities, and health IT support, and we outline how CMS, other payers, and health IT vendors could improve those supports.

- **Competing financial priorities for the specialists and hospitals who serve the CPC+ practices' patients.** Several deep-dive practices from hospital-owned and multispecialty systems acknowledged that the CPC+ goals to reduce hospital/ED admissions and to limit nonessential referrals to specialists posed challenges for the systems' bottom lines, a tension that might be partially resolved through participation in value-based payment initiatives such as ACOs. A few practices recognized that this tension applied to payment reforms in general and thought it would resolve itself as the health care market shifts toward value-based purchasing arrangements, such as ACOs, that reward health care organizations for reducing costs. In the meantime, organizational leaders stressed that if practices can deliver high-value care, they will do better financially in the long term: "It's a steady drum beat of continuing to educate and advocate [for value-based contracting] and show our value in this changing payment environment." A few other organizational leaders noted that any tension is likely to resolve over time as lost revenue from fewer hospital admissions and ED visits is offset by increasing the total volume of patients the system serves, and as gaps in care are addressed that could lead to an increased (and appropriate) use of revenue-generating specialty services.

More incentives are needed for specialists and hospitals to control spending. Even with greater rewards and increased supports for primary care practices for changing how they deliver care, the volume-based FFS incentives influencing the behavior of specialists and hospitals will continue to present a challenge to reducing costs. Because primary care services account for only approximately 5 percent of health care spending, it is necessary to involve specialists, hospitals, and post-acute care facilities in cost-control efforts.

## 4.8. Early insights on sustainability of CPC+ care delivery transformation

CMS envisions that, over time, CPC+ practices will embed CPC+ functions into existing processes or plan other ways to sustain them after CPC+ ends. Because practices and systems remain focused on implementation, it is too early for practices to have established sustainability plans. This section provides some early insights into how CPC+ practices and their health systems are thinking about the potential sustainability of CPC+ care delivery transformation. In general, system and practice leaders appeared to be more focused on sustainability issues than other staff.[51]

[51] We asked system leaders for all system practices broad questions that could elicit responses about sustainability. In addition, we included similar questions in one of the deep-dive interview modules, gathering information from roughly 30 practices, including roughly 10 independent practices.

**Participating practices and health systems valued changes made to meet CPC+ care delivery requirements and signaled interest in sustaining them.** At the same time, these respondents were worried they would lack sufficient resources, particularly to retain new care management staff who were important to many functions but represented a high ongoing cost.

**Deep-dive practices expected that retaining changes that involved upfront investments but minimal ongoing costs would be easier than retaining changes that required significant ongoing costs.** For example, two large practices were optimistic that they could sustain improvements made under CPC+ to develop stronger relationships and communication with external providers such as specialists, behavioral health providers, hospitals, and social service agencies. Another deep-dive practice noted it would be able to readily sustain new processes for identifying patients who are frequently hospitalized or use the ED.

> **"What you're asking these doctors and these practices to do every day, they can't do it with the old way of business. They have to have these additional resources. There has to be some sort of funding that comes along with it at the end. [Primary care practices already] run in the red most of the time."**
>
> ***—System-level CPC+ coordinator***

**Many deep-dive systems and practices were concerned about being able to afford staff newly hired for CPC+—especially care managers—after CPC+ ends.** Many CPC+ practices hired care managers specifically for CPC+, and these new staff performed many roles. However, because practices cannot bill payers for the tasks care managers typically perform, without CPC+ payments, practices would need payment models that allow flexibility in the types of services covered (for instance, if CMS maintained the prospective payments for services [Comprehensive Primary Care Payments] provided to Track 2 practices) or other sources of funding to retain these staff. Deep-dive systems and practices also worried about their ability to keep new behavioral health staff and social workers, because practices are not allowed to bill for some of their tasks. Many deep-dive practices also hired additional medical assistants for CPC+, and one practice expressed concern about its ability to keep this new level of staffing after CPC+. A few deep-dive systems and practices raised deep concerns that they might need to lay off some of the staff they added when CPC+ ends. As one system-level director said, "We have this infrastructure developed—worst case scenario, we can't pay for it. We cut it loose and we go back to square one."

On one hand, some changes practices made for CPC+ have the potential to create efficiencies or reduce operating costs at the practices—such as training less-expensive staff to assume some responsibilities of physicians, giving physicians more time to provide and bill for more services. However, because the CPC+ practices typically were not yet assuming significant financial risk for patient care (receiving mostly FFS rather than population-based payments), savings they might generate from CPC+ (such as reduced hospitalizations and use of the ED) were more beneficial to Medicare and other payers than to the practices, which could impede practices' ability to cover the ongoing costs of the functions.

**Several deep-dive practices avoided making some changes that they would not be able to afford without additional resources, or identified strategies for sustaining changes with fewer resources after CPC+ ends.** For example, a few small to medium-size system-owned practices reported they avoided hiring new staff for CPC+ because they might not have funding to keep them after CPC+. A few other practices were thinking about ways to embed CPC+ functions into existing staff responsibilities and processes, or were looking for other ways to reduce the costs of sustaining them. For example, one deep-dive practice reported it would need to train other practice staff to share the care management tasks, in case it could not afford to retain its care manager when CPC+ ends. Another practice reported plans to reduce costs by automating workflows staff currently conduct manually, such as using health IT to identify and contact patients due for services.

**"There have been things that we haven't done, knowing that CPC+ will go away. Do I really want to build something that all of a sudden I have to shut down as soon as it's over?"**

***—Health system leader***

**A few system-owned deep-dive practices were already seeking ways to replace at least some CPC+ funding, which first involved understanding the costs of maintaining work on the care delivery requirements relative to the benefits they produce.** One health system reported meticulously tracking staff time spent on CPC+ care delivery requirements to estimate the ongoing costs of these activities. A leader of another system hoped to "[financially] justify" behavioral health staff by showing that their treatment helps save the system money by eventually reducing patients' overall risk scores and therefore the need for care management and other services. The director of primary care at a large deep-dive system was hopeful that changes made for CPC+ could be sustained using funding from other quality and value-based payment initiatives in which the practice participated. A few other practices were optimistic that supports from other payers might continue after CPC+, and one system leader reported plans to negotiate such expectations in future contracts with payers.

**"How do we make sure that we can continue with this model even if [CMS] decides after five years to [not] continue [CPC+]? It's important enough that we want to try to maintain the model if that were to ever happen."**

***—Health system leader***

# 5. WHAT WAS THE IMPACT OF CPC+ ON EXPENDITURES, SERVICE USE, AND QUALITY OF CARE FOR MEDICARE FEE-FOR-SERVICE BENEFICIARIES IN 2017?

As practices transform how they deliver care, the changes they make should enable them to improve the management of their patients' chronic conditions, use health care resources more efficiently, and improve patients' ability to manage their own health. Over time, these improvements in health and efficiency should lower Medicare fee-for-service (FFS) expenditures and service use and improve quality of care. In this chapter, we describe the effects of CPC+ for Medicare FFS beneficiaries on claims-based measures of expenditures, service use, and selected aspects of quality for practices that began CPC+ in 2017 during the first year of CPC+ (January through December 2017). Based on the CPC+ model design and literature on related models, we expected to see minimal, if any, changes in outcomes in the first year of CPC+.

We estimated the impact of CPC+ on Medicare FFS beneficiaries by using difference-in-differences regressions that compare the changes in mean beneficiary outcomes from the year before CPC+ with the first year of CPC+ between (1) beneficiaries served by the CPC+ practices and (2) beneficiaries served by a set of similar "comparison" practices that were not participating in CPC+. We compared outcomes for more than 2 million Medicare FFS beneficiaries served by nearly 3,000 CPC+ practices with outcomes for nearly 5 million beneficiaries served by thousands of comparison practices. Because we conducted tests on many outcomes and subgroups and have a large study population, we did not rely simply on tests of statistical significance to interpret observed impacts. Instead, we combined evidence from related outcomes and subgroups, the magnitude of any effects, and the findings from sensitivity tests when interpreting the results.

The analysis of Medicare FFS beneficiaries indicates that, in the first year, in each track, CPC+ did not affect total Medicare expenditures without CMS' enhanced payments. CPC+ increased net costs by 2 to 3 percent after including those enhanced payments and shared savings payments to the Accountable Care Organizations (ACOs) of practices that participate in the Medicare Shared Savings Program (SSP). This finding is consistent with the expectation that CPC+ would not generate favorable impacts on Medicare expenditures in the first year.

We found only a few, very small differences in service use and quality-of-care outcomes between Medicare FFS beneficiaries served by CPC+ and those served by comparison practices. In each track, beneficiaries served by CPC+ practices experienced slightly greater reductions in emergency department (ED) visits (1.2 to 1.6 percent), somewhat slower rates of growth in ambulatory primary care visits (1.6 to 1.8 percent), and slightly larger improvements in quality-of-care measures for recommended services among beneficiaries with diabetes and for breast cancer screening (one percentage point or less), than beneficiaries served by comparison practices. These findings are consistent across the two tracks and generally across subgroups of practices and beneficiaries, including practices that participate in SSP. CPC+ had no statistically significant effects on acute hospitalizations, ambulatory visits to specialists, 30-day readmissions, hospice use, advance care planning visits, or mortality. As noted previously, it is too early to determine the ultimate effects of CPC+.

In Section 5.1 of this chapter, we summarize the key takeaways from the analysis, and in Section 5.2 we describe the methodological approach. In Sections 5.3 and 5.4, we describe findings for Tracks 1 and 2, respectively. In Section 5.5, we discuss key findings and their implications. The Appendices to this report, which are in a separate volume, provide further information on this analysis (Peikes et al. 2019b).

## 5.1. Key takeaways about the effect of CPC+ on Medicare expenditures, service use, and quality of care in 2017 for practices that began CPC+ in 2017

**Key findings from our analysis of the effects of CPC+ on Medicare FFS beneficiaries include:**

- **CPC+ did not appear to affect total Medicare FFS expenditures in the first year.** In both tracks, impact estimates were small and close to zero and not statistically significant, showing that CPC+ had no impact—$3 and $1 per beneficiary per month (PBPM) in Track 1 and Track 2, respectively, or less than half a percent (Table 5.1). These findings were similar by SSP status within each track. The findings were also robust to various sensitivity tests and generally did not vary by beneficiary- or practice-level subgroup. Note that total expenditures for Medicare FFS beneficiaries for services do not include CMS' enhanced CPC+ payments (that is, care management fees [CMFs] and Performance-based Incentive Payments [PBIPs]), but for Track 2 practices, it does include prospective payments made for services (CPCPs).

- **When including CMS' enhanced payments, CPC+ increased costs for Medicare FFS beneficiaries.** Total Medicare expenditures, including CMS' CMFs, increased by $17 and $27 PBPM (2 and 3 percent), respectively, in Track 1 and Track 2 ($p < 0.01$ for each test). For each track, the estimated increase in net Medicare expenditures was similar in size to the average CMFs practices received for Medicare FFS beneficiaries. These findings were similar for SSP and non-SSP practices in each track. After including both CMFs and PBIPs that practices retained, as well as shared savings payments made to the ACO for practices that participate in SSP ACOs, net expenditures for Track 1 and Track 2 practices increased by $18 and $27 PBPM (2 and 3 percent), respectively, relative to comparison practices ($p < 0.01$ for each test).

- **Estimates from the Bayesian analyses showed almost no chance that CPC+ was cost neutral in Year 1.** There was less than a 0.1 percent probability that savings in Medicare expenditures without CMS' enhanced payments were large enough to offset the average CMFs practices received. The probability that CPC+ saved enough in 2017 to offset all of CMS' enhanced payments (that is, the CMFs and PBIPs paid for CPC+, and shared savings payments for the ACOs of CPC+ practices in SSP) was even lower.

- **During Year 1, beneficiaries attributed to CPC+ practices in both tracks experienced a slightly greater reduction in outpatient ED visits and a slightly lower rate of growth in ambulatory care visits to primary care practitioners than those attributed to their comparison counterparts.** In Track 1, for annualized outpatient ED visits per 1,000 beneficiaries, the impact estimate was a decrease of 6 visits per 1,000 (1.2 percent), and in

Track 2, it was a decrease of 8 visits per 1,000 (1.6 percent; $p < 0.01$ for each) (Table 5.1). Outpatient ED visits include ED visits that do not lead to a hospitalization, as well as observation stays.

For CPC+ practices relative to comparisons, annualized ambulatory primary care visits grew by 74 fewer visits per 1,000 attributed beneficiaries (1.6 percent) in Track 1 and by 87 fewer visits per 1,000 attributed beneficiaries (1.8 percent) in Track 2 ($p < 0.01$ for each). These findings were similar for practices that were and were not in SSP in both tracks.

We do not consider the small effects observed for outpatient ED visits and primary care visits to be conclusive evidence of CPC+ impacts, because we have conducted many statistical tests for this report and, even if CPC+ had no true effects, we would expect to find some statistically significant results (either favorable or unfavorable) purely due to chance, given the number of hypotheses tested.

- **CPC+ was associated with small improvements in planned care and population health measures for recommended services among beneficiaries with diabetes and for breast cancer screening.** In both tracks, practices that started CPC+ in 2017 experienced small improvements of one percentage point or less, relative to the comparison group, in the proportions of eligible beneficiaries who received recommended preventive care for diabetes or breast cancer screening (Table 5.2). In Track 1, these improvements were concentrated in the non-SSP group. There were no changes relative to the comparison group in 30-day unplanned readmissions or in the two measures of patient and caregiver engagement.

- **Although it is too early to draw conclusions about the effect of CPC+ on quality of care from these small estimates, the findings are fairly consistent with the literature.** The results from CPC+ are similar—though slightly more favorable—than analogous findings for CPC Classic. CPC Classic had little effect on the limited set of quality-of-care measures we could track using claims at any point during the four intervention years (Peikes et al. 2018a, 2018c). Also, the CPC+ findings are consistent with favorable effects on planned care and population health outcomes in other studies (Sinaiko et al. 2017; Friedberg et al. 2014; Rosenthal et al. 2016; Timbie et al. 2017; Shi et al. 2017a, 2017b; Ashburner et al. 2017). However, given the limited set of claims-based quality measures, the small magnitude of the CPC+ estimates, and the fact that we have only one year of data so far from the intervention, we cannot draw conclusions about CPC+'s impact on quality.

- **Year 1 CPC+ findings for Medicare expenditures and service use were somewhat similar to findings from other studies and the first year of CPC Classic.** Early relative reductions for ED visits and ambulatory visits to primary care practitioners for CPC+ were similar in size to those in CPC Classic (a decline of 1 percent). However, CPC Classic also had early favorable impacts of 2 percent reductions each in hospitalizations and Medicare expenditures without fees; these favorable estimates were not observed in the first year of CPC+. In general, other studies have found mixed effects of primary care transformation on ED visits, hospitalizations, and expenditures. Some studies found savings (for example, Cuellar et al. 2016; Shi et al. 2017b; Song et al. 2014; OIG 2017; McWilliams et al. 2016, 2018), whereas others, including the evaluation of all four years of CPC Classic, did not

(Peikes et al. 2018a, 2018c; Friedberg et al. 2014; Yoon et al. 2016; Orzol et al. 2018; Zulman et al. 2017; Nichols et al. 2018; Sinaiko et al. 2017).

**It is too early to know whether CPC+ will ultimately improve key outcomes for Medicare FFS beneficiaries.** In the absence of additional years of data, these early findings do not yet provide strong evidence of causal impacts from CPC+. Given other literature and the CPC+ model's theory of change, we did not expect to see favorable effects on expenditures, or sizable effects on other outcomes, during the first year of practice transformation. We expect that any favorable effects of CPC+ may grow as the participating practices implement the CPC+ transformations, and as practice changes affect patients' health, service use, and cost. In subsequent annual reports, we will monitor the relevant estimates to determine whether the favorable findings for ED visits and quality-of-care outcomes persist or increase, and whether CPC+ ultimately leads to reductions in total expenditures and improvements in other key outcomes.

**Table 5.1. Summary table of impacts (in percentages) on expenditures and service use measures for Medicare FFS beneficiaries over the first year of CPC+, for 2017 Starters, by track and SSP participation status**

| | Track 1 | | | | Track 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | CPC+ mean in Year 1, overall | Percentage impacts, overall | Percentage impacts, SSP | Percentage impacts, non-SSP | CPC+ mean in Year 1, overall | Percentage impacts, overall | Percentage impacts, SSP | Percentage impacts, non-SSP |
| **Medicare expenditures (PBPM)** | | | | | | | | |
| Total Medicare Part A and B expenditures excluding enhanced CPC+ payments (for Track 2 practices, CPC+ CPCPs are included) | $882 | 0.3% | 0.0% | 0.7% | $877 | 0.1% | -0.3% | 0.5% |
| Total Medicare Part A and B expenditures including CPC+ CMFs (and for Track 2 practices, CPC+ CPCPs) | $896 | ***1.9%**** | ***1.5%**** | ***2.3%**** | $902 | ***3.0%**** | ***2.5%**** | ***3.4%**** |
| Total Medicare Part A and B expenditures including CPC+ CMFs and PBIPs (and for Track 2 practices, CPC+ CPCPs) | $897 | ***2.0%**** | NA | ***2.5%**** | $904 | ***3.2%**** | NA | ***3.7%**** |
| Total Medicare Part A and B expenditures including CPC+ CMFs, PBIPs, and shared savings payments to SSP ACOs (and for Track 2 practices, CPC+ CPCPs) | $899 | ***2.0%**** | ***1.5%**** | NA | $905 | ***3.0%**** | ***2.2%**** | NA |
| **Medicare expenditures by service category (PBPM)** | | | | | | | | |
| Inpatient expenditures | $310 | 0.7% | 0.1% | 1.5% | $313 | 0.3% | -0.6% | 1.2% |
| Outpatient expenditures | $171 | 0.1% | 0.2% | 0.1% | $173 | 0.1% | 0.4% | -0.2% |
| Expenditures on physician and nonphysician Part B noninstitutional services in any setting | $255 | -0.1% | -0.6% | 0.4% | $244 | ***-1.1%**** | ***-2.0%**** | -0.4% |
| Expenditures on ambulatory visits with primary care physicians | $25 | ***-0.8%*** | -0.8% | -0.8% | $23 | ***-8.5%**** | ***-8.5%**** | ***-8.5%**** |
| Expenditures on ambulatory visits with specialists | $26 | 0.1% | ***-0.6%*** | ***0.9%*** | $24 | -0.3% | -0.4% | -0.2% |
| Skilled nursing home expenditures | $64 | 0.5% | 0.1% | 0.8% | $62 | -0.3% | 1.1% | -1.6% |
| Home health expenditures | $38 | -0.9% | -0.4% | -1.4% | $39 | -1.2% | -0.4% | ***-1.8%**** |
| Hospice expenditures | $24 | ***4.6%**** | ***6.5%**** | 2.6% | $24 | 2.3% | 1.6% | 2.8% |
| Durable medical equipment expenditures | $20 | -0.3% | -1.6% | 1.0% | $20 | 1.7% | 0.7% | 2.5% |
| **Service use (per 1,000 beneficiaries per year)** | | | | | | | | |
| Acute hospitalizations (short-stay acute care and CAHs) | 279 | -0.4% | ***-1.2%**** | 0.4% | 281 | -0.5% | -0.5% | -0.4% |
| Total ED visits, including observation stays | 686 | ***-1.1%**** | ***-1.3%*** | -0.9% | 684 | ***-1.2%**** | ***-1.3%*** | ***-1.1%*** |
| Outpatient ED visits, including observation stays | 478 | ***-1.2%**** | ***-1.2%*** | ***-1.2%**** | 476 | ***-1.6%**** | ***-2.0%**** | ***-1.2%**** |

**Table 5.1.** ***(continued)***

| | Track 1 | | | | Track 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | CPC+ mean in Year 1, overall | Percentage impacts, overall | Percentage impacts, SSP | Percentage impacts, non-SSP | CPC+ mean in Year 1, overall | Percentage impacts, overall | Percentage impacts, SSP | Percentage impacts, non-SSP |
| Ambulatory primary care visits (including to FQHCs, RHCs, and CAHs) | 4,507 | ***-1.6%**** | ***-1.5%**** | ***-1.7%**** | 4,585 | ***-1.8%**** | ***-1.4%**** | ***-2.2%**** |
| Ambulatory specialty care visits | 4,644 | -0.2% | ***-0.6%**** | 0.4% | 4,449 | -0.2% | -0.3% | 0.0% |
| **Sample sizes** | | | | | | | | |
| Number of CPC+ practices | | 1,373 | 738 | 635 | | 1,515 | 636 | 879 |
| Number of comparison practices | | 5,247 | 2,981 | 2,266 | | 3,784 | 1,817 | 1,967 |
| Number of beneficiaries in CPC+ practices | | 1,039,783 | 536,943 | 504,756 | | 1,263,651 | 563,755 | 702,985 |
| Number of beneficiaries in comparison practices | | 3,455,337 | 2,012,629 | 1,453,322 | | 2,928,232 | 1,469,296 | 1,467,369 |
| Total number of beneficiary-years | | 7,631,289 | 4,319,927 | 3,311,362 | | 7,130,927 | 3,449,139 | 3,681,788 |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Notes: We base impact estimates on a difference-in-differences analysis; they reflect the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in Year 1 of CPC+ compared with the average outcome in the baseline year, relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. **Yellow shading** ***with bold, italicized text*** signifies that an estimate was statistically significant. Expenditures on Part B noninstitutional services include expenditures on ambulatory primary care visits, ambulatory specialist visits, and on non-ambulatory physician visits as well as services provided by other noninstitutional providers (the third category is not shown separately). For Medicare service use, measures of outpatient ED visits and total ED visits include observation stays. Ambulatory visits with primary care practitioners and specialists include office-based visits and visits at home, as well as visits in other settings, such as FQHCs, RHCs, and CAHs.

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.
NA = not applicable, because only CPC+ practices that participate in SSP are eligible to receive shared savings payments, and only non-SSP practices are eligible to receive Performance-based Incentive Payments.

ACO = Accountable Care Organization; CAH = critical access hospital; CMF = care management fee; CPCP = Comprehensive Primary Care Payment; ED = emergency department; FFS = fee-for-service; FQHC = federally qualified health center; PBIP = Performance-based Incentive Payment; PBPM = per beneficiary per month; RHC = rural health center; SSP = Medicare Shared Savings Program.

## Table 5.2. Summary table of impacts (in percentage points) on claims-based quality-of-care measures for Medicare FFS beneficiaries over the first year of CPC+, for 2017 Starters, by track and SSP participation status

| | Track 1 | | | | Track 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | CPC+ mean in Year 1, overall | Impact estimates (percentage points), overall | Impact estimates (percentage points), SSP | Impact estimates (percentage points), non-SSP | CPC+ mean in Year 1, overall | Impact estimates (percentage points), overall | Impact estimates (percentage points), SSP | Impact estimates (percentage points), non-SSP |
| **Planned care and population health measures for beneficiaries ages 18–75 with diabetes** | | | | | | | | |
| Received HbA1c test | 90.8% | -0.1 | -0.2 | 0.0 | 92.4% | ***0.4**** | 0.1 | ***0.5**** |
| Received eye exam | 62.5% | ***1.0***** | 0.4 | ***1.6***** | 63.8% | ***0.6**** | ***0.7**** | 0.5 |
| Received attention for nephropathy | 81.7% | ***0.7***** | 0.3 | ***1.1***** | 83.1% | ***0.5**** | 0.5 | 0.4 |
| Diabetes composite measure 1 (received all three tests above: HbA1c test, eye exam, attention for nephropathy) | 50.3% | ***0.8***** | -0.1 | ***1.8***** | 52.8% | ***0.8***** | ***1.0**** | ***0.7**** |
| Diabetes composite measure 2 (received none of the three tests above) | 2.3% | ***-0.2**** | ***-0.2**** | -0.2 | 2.0% | -0.1 | 0.0 | ***-0.2**** |
| **Sample sizes for the diabetes measures** | | | | | | | | |
| Number of beneficiaries in CPC+ practices | | 136,656 | 69,176 | 67,694 | | 166,562 | 73,486 | 93,387 |
| Number of beneficiaries in comparison practices | | 455,268 | 259,547 | 196,830 | | 378,816 | 186,315 | 193,302 |
| Total number of beneficiary-years | | 912,744 | 506,478 | 406,266 | | 842,962 | 400,201 | 442,761 |
| **Planned care and population health measures for female beneficiaries 52–74 years of age** | | | | | | | | |
| Received breast cancer screening | 73.3% | ***0.4***** | 0.1 | ***0.8***** | 74.5% | ***0.4***** | 0.2 | ***0.6***** |
| **Sample sizes for the breast cancer screening measure** | | | | | | | | |
| Number of beneficiaries in CPC+ practices | | 248,926 | 128,127 | 121,248 | | 297,867 | 132,295 | 166,230 |
| Number of beneficiaries in comparison practices | | 819,120 | 475,297 | 346,253 | | 688,236 | 343,379 | 346,745 |
| Total number of beneficiary-years | | 1,708,383 | 963,087 | 745,296 | | 1,580,382 | 759,876 | 820,506 |
| **Care coordination measures** | | | | | | | | |
| 30-day all-cause unplanned readmissions | 15.4% | 0.0 | 0.0 | 0.0 | 15.3% | -0.1 | -0.1 | -0.1 |
| **Patient and caregiver engagement measures** | | | | | | | | |
| Received hospice services | 2.7% | 0.0 | ***0.1**** | 0.0 | 2.8% | 0.0 | 0.0 | 0.1 |
| Had an advance care plan visit | 3.6% | -0.4 | 0.0 | ***-0.8**** | 3.7% | -0.1 | 0.0 | -0.1 |
| **Sample sizes for unplanned readmission, receiving hospice services, and having an advance care plan visit measures** | | | | | | | | |
| Total number of index discharges for readmissions | | 1,813,899 | 1,023,608 | 790,291 | | 1,704,836 | 835,144 | 869,692 |
| Number of beneficiaries in CPC+ practices | | 1,039,783 | 536,943 | 504,756 | | 1,263,651 | 563,755 | 702,985 |
| Number of beneficiaries in comparison practices | | 3,455,337 | 2,012,629 | 1,453,322 | | 2,928,232 | 1,469,296 | 1,467,369 |

**Table 5.2.** ***(continued)***

| | Track 1 | | | | Track 2 | | | |
|---|---|---|---|---|---|---|---|---|
| | CPC+ mean in Year 1, overall | Impact estimates (percentage points), overall | Impact estimates (percentage points), SSP | Impact estimates (percentage points), non-SSP | CPC+ mean in Year 1, overall | Impact estimates (percentage points), overall | Impact estimates (percentage points), SSP | Impact estimates (percentage points), non-SSP |
| Total number of beneficiary-years | | 7,631,289 | 4,319,927 | 3,311,362 | | 7,130,927 | 3,449,139 | 3,681,788 |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Notes: We base impact estimates on a difference-in-differences analysis; they reflect the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in Year 1 of CPC+ compared with the average outcome in the baseline year, relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. **Yellow shading** ***with bold, italicized text*** signifies that our estimate was statistically significant. For the readmissions outcome, which is estimated at the discharge level, we also controlled for discharge-level risk factors. For the binary quality-of-care outcomes, we present the absolute impact estimate on the relevant measures only in percentage points. We do so because percentage impacts for some of the measures are likely to be misleadingly large, given the low means for the measures. We grouped the claims-based quality-of-care measures into four domains according to the CPC+ function where they are covered in the 2018 implementation guide (CMMI 2018).

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

SSP = Medicare Shared Savings Program.

## 5.2. Methods

We estimated impacts for Medicare FFS beneficiaries on claims-based outcomes—including Medicare expenditures, health care service use, and a limited set of quality-of-care process and outcome measures—by comparing the changes in outcomes over time for CPC+ beneficiaries relative to changes in a matched comparison group. Our sample includes practices that were participating in CPC+ as of April 1, 2017, that is, at the end of the first quarter for the practices that began CPC+ in 2017.[52] For this report, we excluded the practices that began CPC+ in 2018, because we had insufficient data to estimate impacts during their first intervention year. The rest of this section describes the methods used to estimate effects in detail. Readers can find detailed results starting in Section 5.3.

### 5.2.1. Sample of Medicare FFS Beneficiaries

The intervention group used for our impact evaluation consists of beneficiaries we assigned to CPC + practices and to beneficiaries we assigned to comparison practices (as described below, our assignment approach differs from the approach CMS used for payment). Once a beneficiary was assigned in any baseline or intervention quarter, we continued to include that beneficiary in future baseline and intervention quarters, even if their practice later left CPC+. We followed the same intent-to-treat (ITT) approach for comparison beneficiaries, to ensure comparability with the CPC+ sample.

For Track 1, our analyses included 1,039,783 unique Medicare FFS beneficiaries served by 1,373 CPC+ practices and 3,455,337 unique beneficiaries served by 5,247 matched comparison practices during either baseline or Year 1. These practices served 874,826 beneficiaries assigned to CPC+ practices and 2,906,755 beneficiaries assigned to comparison practices during the baseline year alone.[53]

For Track 2, the analyses included 1,263,651 unique Medicare FFS beneficiaries served by 1,515 CPC+ practices and 2,928,232 served by 3,784 matched comparison practices during either baseline or Year 1. These practices served 1,068,107 beneficiaries assigned to CPC+ practices and 2,467,459 beneficiaries assigned to comparison practices during the baseline year alone.

To attribute each beneficiary to a CPC+ or comparison practice, we first defined the set of practitioners within a practice site using data we purchased from SK&A (a commercial health care data vendor that maintains and verifies lists of practitioners who work in practices throughout the country), along with the tax identification number that we inferred from the

[52] Of the 2,905 CPC+ practices that started the initiative on January 1, 2017, 17 practices (0.6 percent) withdrew in the first quarter, and 2,888 practices were participating as of April 1, 2017.

[53] After accounting for weights that adjust for matching and time observed in Medicare FFS, the effective sample sizes for the baseline period for Track 1 are 829,558 CPC+ and 1,307,302 comparison beneficiaries, and for Track 2 are 1,012,995 CPC+ and 996,653 comparison beneficiaries. Calculations assume that observations are independent. Although we are using a simplification, these calculations demonstrate the impact of weighting, specifically, on the effective sample size.

Medicare claims data.[54] We then attributed each beneficiary to a practice based on the following decision rule: if a beneficiary's ***most recent*** eligible primary care service in the previous two years was for chronic care management (CCM), we attributed the beneficiary to the practice that provided that CCM-related service. Otherwise, we attributed the beneficiary to the practice with the plurality, or largest share, of primary care visits during the previous two years (including cases where a beneficiary had CCM billed but the most recent visit was not for CCM-related services).

To be eligible for attribution in a given calendar quarter, at the start of that quarter, a beneficiary had to be alive, have both Part A and B Medicare FFS coverage with Medicare as the primary payer, and not be covered under a Medicare Advantage or other Medicare health plan. For payment attribution, CMS also requires that beneficiaries (1) not have end-stage renal disease and not be enrolled in hospice,[55] (2) not be long-term institutionalized, and (3) not be enrolled in any other program that includes a Medicare FFS shared savings opportunity, except SSP.[56] For the evaluation, we do not apply these three exclusions in identifying attributed beneficiaries, because CMS expects the intervention to affect all beneficiaries[57] attributed to the practice, not just those for whom CMS calculates payments.

Although CMS and the evaluation used different approaches to attribute practitioners and patients, the resulting samples overlap considerably. For instance, we found that 81 percent of practitioners in the December 2016 CPC+ roster appeared in the SK&A-based rosters, and a similar percentage of SK&A practitioners appeared in CPC+ rosters. Also, we found about 90 percent overlap between the samples of beneficiaries CMS and the evaluation attributed to CPC+ practices in any particular quarter (see Figure 5.1). Appendix 5.A describes the attribution steps for the evaluation and the differences between the payment and evaluation attribution process and sample in more detail.

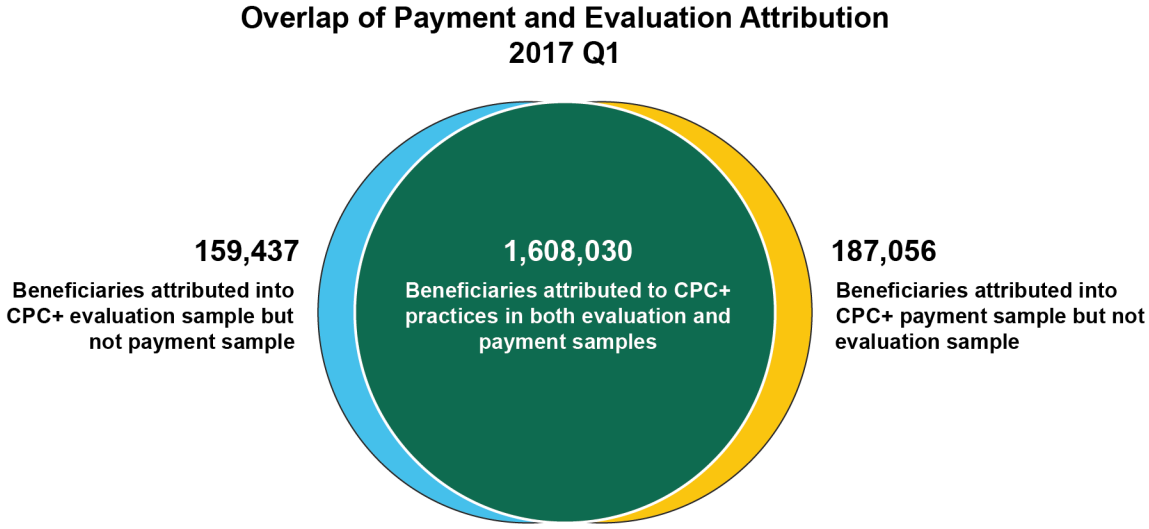
[54] CMS tracks the set of practitioners based on National Provider Identifiers (NPIs) at each CPC+ practice site, but we did not have similar data for the comparison practices, so we used SK&A data for both CPC+ and comparison practices.

[55] Note that this CMS criterion applies only to beneficiaries who have not been previously attributed to the CPC+ practice. If beneficiaries have been previously attributed to a CPC+ practice, then developing end-stage renal disease or enrolling in hospice does not disqualify them from being attributed to that CPC+ practice. For the evaluation, all beneficiaries with end-stage renal disease and those enrolled in hospice are eligible for attribution.

[56] For evaluation attribution, we determine eligibility status on the day of the start of the quarter. For payment attribution, CMS determines eligibility status one month before the quarter starts.

[57] Ideally, we would go one step further and include *all* patients the practice serves, but the evaluation has readily available data only for Medicare FFS beneficiaries. Also, our sample does require beneficiaries to be attributed to a practice—and does not include all Medicare FFS beneficiaries ever seen by the practice—because it would be difficult for a practice to affect the outcomes of beneficiaries that were primarily under the care of another practice.

**Figure 5.1. Attribution of Medicare FFS beneficiaries for the 2017 Starters**




Source: Comparison of attributed Medicare FFS beneficiaries in Mathematica's evaluation sample for the first quarter of CPC+ (January through March 2017) and those in CMS' payment sample for the second quarter of CPC+ (April through June 2017), based on Medicare FFS beneficiary attribution lists provided by CMS.

FFS = fee-for-service.

Following attribution for each quarter, we *assigned* beneficiaries to practices using an ITT approach.[58] Specifically, we assigned a beneficiary to the first CPC+ practice or comparison practice to which it was attributed and then continued to include them for the rest of the baseline or follow-up period. For calendar year 2017 (the first intervention year), we assigned beneficiaries to the first practice they were attributed to in 2017, and for calendar year 2016 (the baseline year for this analysis) we assigned beneficiaries to the practice they were first attributed to in 2016.

### 5.2.2. Comparison group

We drew the comparison group from practices that provide primary care in regions not selected for CPC+—that is, those that are outside the CPC+ regions. We selected comparison groups separately for Track 1 and Track 2, because CMS views each track as a separate intervention that should be analyzed separately. Baseline practice surveys show that CPC+ practices in the two tracks differ, on average, in their reported care delivery approaches, reflecting CMS' different eligibility criteria for the two tracks, and baseline characteristics. Similarly, we matched practices separately within track by SSP status, because we and CMS deemed participation in SSP to be the most important practice characteristic that could affect outcomes, given that SSP practices face different payment incentives. The end result was six comparison groups supporting analyses for six groups: (1) Track 1 overall, (2) Track 2 overall, (3) Track 1-SSP, (4) Track 1-non-SSP, (5) Track 2-SSP, and (6) Track 2-non SSP.

[58] For payment attribution, CMS does not use an ITT procedure and refreshes attribution status each quarter.

Matching characteristics included practice characteristics (such as the number of practitioners and urban/rural status) and averages of the characteristics of the practice's Medicare FFS beneficiaries (such as age and expenditures during the year before CPC+ began [2016]), as shown in Table 5.3. We identified these characteristics from Medicare claims and enrollment data as well as other secondary data sources such as SK&A, CMS data on participation in Center for Medicare & Medicaid Innovation models other than CPC+, and the Area Health Resource File.

The characteristics of the resulting comparison groups were comparable to those of the CPC+ practices that started in 2017. The absolute value of the standardized differences, based on the means and their standard deviations, met our target of 0.10 or less in all cases, except for a standardized difference of 0.14 between CPC+ practices in Track 2 and their matched comparison practices on whether a practice participated in prior primary care transformation initiatives. (Tables 5.B.3 to 5.B.8 in Appendix 5.B show post-matching balance, including standardized differences, between the CPC+ and comparison practices, by track and SSP status.) Appendix 5.B contains more detail on the methods used to select the comparison groups.

**Table 5.3. Similarity of the CPC+ and comparison groups: practice values scaled by number of Medicare FFS beneficiaries for 2017 Starters, by track**

| Practice characteristic | Data source for characteristic | Track 1 | | Track 2 | |
|---|---|---|---|---|---|
| | | Mean among CPC+ practices (N = 1,373) | Weighted mean among comparison practices (N = 5,247) | Mean among CPC+ practices (N = 1,515) | Weighted mean among comparison practices (N = 3,784) |
| Whether participated in Medicare SSP as of January 1, 2017 (%) | MDM January 1, 2017 | 51.2 | 52.3 | 44.4 | 44.2 |
| Whether owned by a health system or hospital (%) | SK&A 2016 | 55.1 | 55.3 | 58.1 | 59.9 |
| Whether practice participated in prior primary care transformation initiatives[a] (%) | Data from CMS and from organizations that offer medical home recognition | 53.6 | 52.4 | 80.9 | 75.3 |
| Urbanicity of practice's county | | | | | |
| Rural (%) | Area Health Resource File 2016 | 10.3 | 9.8 | 7.6 | 7.7 |
| Suburban (%) | Area Health Resource File 2016 | 18.1 | 18.4 | 16.0 | 16.9 |
| Urban (%) | Area Health Resource File 2016 | 71.6 | 71.8 | 76.4 | 75.5 |
| Mean PBPM Medicare expenditures in 2016 | EDB and claims data | $882 | $884 | $877 | $879 |
| Acute hospitalizations (short-stay acute care and CAHs) in 2016 per 1,000 beneficiaries, annualized | EDB and claims data | 285.8 | 283.6 | 287.5 | 283.7 |
| Outpatient ED visits, including observation stays in 2016 per 1,000 beneficiaries, annualized | EDB and claims data | 495.1 | 499.4 | 494.0 | 495.0 |
| Mean 2015 HCC score among beneficiaries assigned in 2016 | EDB and claims data | 1.02 | 1.02 | 1.03 | 1.03 |
| Whether practice had: | | | | | |
| 1–2 primary care practitioners (%) | SK&A 2016 | 21.3 | 21.6 | 13.0 | 13.5 |
| 3–4 primary care practitioners (%) | SK&A 2016 | 23.2 | 24.0 | 22.3 | 22.2 |
| 5–7 primary care practitioners (%) | SK&A 2016 | 25.6 | 25.4 | 26.1 | 26.2 |
| 8+ primary care practitioners (%) | SK&A 2016 | 29.9 | 29.0 | 38.6 | 38.1 |

**Table 5.3.** ***(continued)***

| Practice characteristic | Data source for characteristic | Track 1 | | Track 2 | |
|---|---|---|---|---|---|
| | | Mean among CPC+ practices (N = 1,373) | Weighted mean among comparison practices (N = 5,247) | Mean among CPC+ practices (N = 1,515) | Weighted mean among comparison practices (N = 3,784) |
| Whether practice was multispecialty[b] (%) | SK&A 2016 | 19.6 | 20.0 | 26.1 | 26.1 |
| Hospital Referral Region price index | CMS' Medicare Geographic Variation data, 2015 | 1.05 | 1.06 | 1.05 | 1.05 |
| Whether practice was early adopter of EHRs—first attesting to meaningful use[c] in 2011 or 2012 (%) | CMS' Medicare EHR Incentive Program data | 78.7 | 78.6 | 88.1 | 87.8 |
| Number of assigned Medicare FFS beneficiaries in 2016 per PCP | Mathematica attribution based on SK&A roster | 231 | 226 | 196 | 201 |

Source: Mathematica's analysis of baseline practice characteristic data of CPC+ and matched comparison practices.

Note: Because CPC+ is a practice-level intervention, and to aid computation, we matched using practice-level data rather than beneficiary-level data. However, we conducted analyses of Medicare claims-based outcomes using beneficiary-level data rather than practice-level data, so we show balance statistics to approximate beneficiary-level balance. This approach best reflects the baseline balance among the analytic sample that we used in regression analyses. Specifically, the means in this table represent practice-level means, scaled by the number of Medicare FFS beneficiaries assigned to each practice in 2016.

[a] We define participation in prior primary care transformation initiatives as participation in CPC Classic or MAPCP or being a medical home (indicated by NCQA, TJC, AAAHC, URAC, or state medical-home recognition status).

[b] We define multispecialty as having at least one practitioner, according to SK&A, with a specialty other than general practice, internal medicine, family medicine, or geriatrics.

[c] We define meaningful EHR use as having at least one practitioner within the practice who attested to meaningful use under the CMS Medicare EHR Incentive Program.

AAAHC = Accreditation Association for Ambulatory Health Care; CAH = critical access hospital; CMS = Centers for Medicare & Medicaid Services; ED = emergency department; EDB = Medicare enrollment database; EHR = electronic health record; FFS = fee-for-service; HCC = hierarchical condition category; HRR = hospital referral region; MAPCP = Multi-payer Advanced Primary Care Practice; MDM = CMS master data management system; NCQA = National Committee for Quality Assurance; PBPM = per beneficiary per month; PCP = primary care practitioner; SSP = Medicare Shared Savings Program; TJC = The Joint Commission; URAC = Utilization Review Accreditation Commission.

### 5.2.3. Outcomes

CMS theorized that changes in care delivery made by CPC+ practices would result in a reduction in overall Medicare expenditures that is great enough to offset CMS' enhanced payments. To test this hypothesis, we analyzed Medicare expenditures for FFS beneficiaries (1) without CMS' enhanced payments and (2) with CMS' enhanced payments. (As we are estimating impacts for Medicare expenditures for FFS beneficiaries, we do not include enhanced payments from other payers in our calculations.) Enhanced payments are made *in addition to traditional payments for services.* These enhanced payments include CMS' CPC+ care management fees for Medicare FFS beneficiaries as well as CMS' payments for rewarding performance: (1) prospectively paid and retrospectively reconciled performance-based payments for practices not participating in the Medicare SSP and (2) shared savings payments to ACOs for practices participating in SSP.

For Track 2 practices, CMS also provided alternative payments that shifted a portion of practices' payments for services from FFS to prospective payments—referred to as Comprehensive Primary Care Payments (CPCPs). As these are payments *for services*, they are included in both sets of Medicare expenditures analyses.

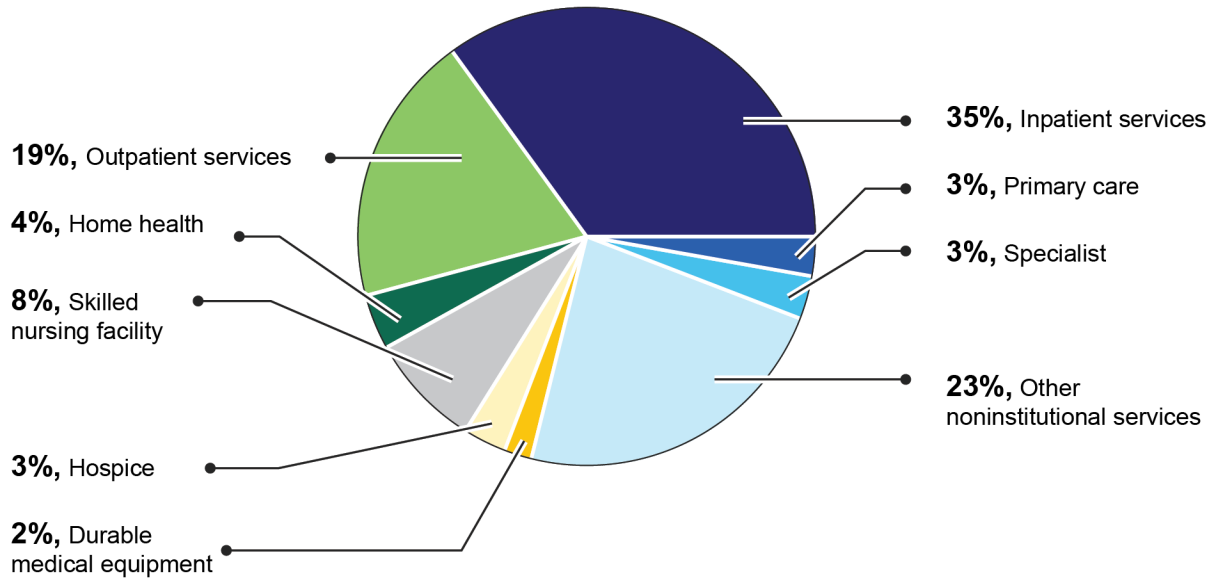
The primary outcome of the CPC+ evaluation is Medicare Part A and B total expenditures without CMS' enhanced payments (but including prospective payments for services—that is, CPCPs—for Track 2 practices).

We also evaluated impacts on a range of expenditures and service use outcomes for Medicare FFS beneficiaries, so that CMS might consider the patterns of effects across these domains along with any observed impacts on total expenditures. These expenditures include net Medicare expenditures with CMS' enhanced payments (defined above) and expenditures by service category. (Figure 5.2 shows the shares each service category accounted for at baseline among beneficiaries in Track 1; the shares were comparable for beneficiaries in Track 2.) We examined selected measures of Medicare service use—number of hospitalizations, ED visits, and ambulatory visits with primary care practitioners and with specialists.

We also examined impacts on selected claims-based quality-of-care outcomes. These measures include planned care and population health (recommended services among patients with diabetes and breast cancer screening), patient and caregiver engagement (any use of hospice, any physician visit with advance care planning), and care coordination (unplanned 30-day readmissions). These claims-based quality measures do not correspond one-to-one to the electronic clinical quality measures (eCQMs) that CPC+ practices are required to report and on which payment is based. Also, they cover a narrower range of quality concepts than the eCQMs.[59] However, unlike the eCQMs, they can be measured comparably for both the CPC+ and comparison practices. For a list of all outcome measures, including details on how we constructed each measure, see Appendix 5.C.

[59] The eCQMs cover a wider range of quality concepts than we can measure in claims—for example, not just receipt of recommended services but also clinical outcomes (such as control of high blood pressure) and advanced care processes (such as receipt of specialist reports following referrals). The eCQMs also cover a wider population than claims-based measures: that is, all patients regardless of payer, rather than Medicare FFS beneficiaries only. We plan to report eCQM performance in future annual reports.

**Figure 5.2. Total Medicare FFS expenditures, in dollars PBPM, by service category, for Track 1 2017 Starters**




Source: Mathematica's analysis of Medicare claims data for 2016.

Note: This figure breaks noninstitutional expenditures on physician and non-physician services into three categories: (1) expenditures on ambulatory primary care visits (labeled primary care), (2) expenditures on ambulatory specialist visits (labeled specialist), (3) and expenditures on other noninstitutional services (such as non-ambulatory visits with primary care practitioners or specialists, and services provided by ambulance providers, independent clinical laboratories, and free-standing ambulatory surgical centers).

FFS = fee-for-service; PBPM = per beneficiary per month

### 5.2.4. Regression methods

We estimated the impact of CPC+ on Medicare FFS beneficiaries by using difference-in-differences regressions. Specifically, we compared the mean outcomes between beneficiaries assigned to CPC+ and comparison practices during (1) the baseline year before CPC+ (2016) and (2) the first intervention year of CPC+ (2017), while controlling for beneficiary characteristics and practice fixed effects. The beneficiary-level control variables include demographics (age categories, race categories, and gender), chronic conditions, original reason for Medicare entitlement, dual eligibility status, and hierarchical condition category (HCC) score (see Appendix 5.D, Table 5.D.3 for a detailed list). Including practice fixed effects helps to account for any remaining imbalance in the practice-level matching variables and in any other unmeasured and time-invariant practice characteristics at baseline. For all outcomes, we used a linear regression model and accounted for non-independence across observations within the same practice using standard error estimates clustered at the practice level. We applied weights to the observations in the regressions so that (1) beneficiaries who were observed in Medicare FFS data for more of the period received relatively more weight than those observed for less of

the period, [60] and (2) the CPC+ and comparison groups were comparable (using the weights resulting from the comparison selection). All impact estimates we obtained are at the *beneficiary level,* but we sometimes describe them as differential changes experienced by CPC+ versus comparison *practices* in our discussion of results, because the intervention took place at the practice level. We used two-tailed tests with $p < 0.10$ as the threshold of statistical significance. Although we did not apply any formal multiple comparison corrections (many of which are known to be overly conservative), our approach to interpreting impact estimates aimed to avoid "false positives" (Peterson et al. 2018). Specifically, we combined evidence from *p*-values with evidence from subgroup analyses, related outcomes, sensitivity tests, and the implementation analysis to interpret observed results. See Appendix 5.D for additional details on the regression methods.

## A. Sensitivity tests

We conducted sensitivity tests to assess the robustness of the findings on total Medicare expenditures without CMS' enhanced payments to:

- Model specification (for example, using a generalized linear model with log link for analysis of expenditures),
- Definition of the beneficiary sample included in the analysis (for example, using a sample of beneficiaries attributed during CPC+ and controlling for their baseline characteristics and outcomes instead of using a baseline sample),
- Definition of the baseline period (for example, using two baseline years instead of one), and
- Definition of the outcome variables (for example, trimming expenditures at the 98th percentile of the beneficiary-level distribution).

We describe each of these sensitivity tests, along with its motivation, in Appendix 5.D, Table 5.D.8.

When results from the sensitivity tests were not consistent with results from our main analysis, we incorporated that information into our discussion and interpretation of findings. We assessed the conditions under which the alternative estimates would be more accurate, and the likelihood that those conditions were met.

[60] We account for partial observability during a measurement period (here, the first year) by annualizing Medicare expenditures and service use outcomes. For these outcomes (and for binary outcomes measuring quality of care), we also use eligibility or enrollment weights that are based on the proportion of months a beneficiary was assigned and enrolled in Medicare FFS during each measurement period.

## B. Subgroup analyses

The impacts of CPC+ could differ for different types of beneficiaries and practices, based on their baseline characteristics. Therefore, for our primary outcome of Medicare FFS expenditures without enhanced payments, we estimated the effects of the initiative on *subsets of beneficiaries* for whom theory suggests that CPC+ is likely to have especially large effects, such as patients that are chronically ill and other patients with complex needs (Brown et al. 2012; Rich et al. 2012). Specifically, we examined variation in impacts for five subgroups based on baseline beneficiary characteristics, including beneficiaries who (1) were in the highest quartile of the distribution of HCC scores in the analytic sample,[61] (2) were in the highest decile of the distribution of HCC scores or had dementia, (3) had at least 2 of 12 most commonly occurring chronic conditions and a hospitalization in the prior year, (4) had behavioral health conditions, or (5) were dually eligible for Medicaid.

We also examined effects for different *types of practices* for which CPC+ might have differential effects, defined using baseline characteristics, including practices that (1) participated in prior primary care transformation initiatives (participated in CPC Classic or Multi-payer Advanced Primary Care Practice [MAPCP] or were recognized as a medical home); (2) were owned by either a hospital or a health system at baseline; (3) were small (one or two primary care practitioners), medium (three to five practitioners), or large (six or more practitioners); (4) attested to meaningful use early (in 2011 or 2012); (5) were multispecialty; or (6) were located in rural or suburban versus urban counties. To account for correlation in practice characteristics, we estimated a single regression that included all practice subgroup interactions, instead of estimating a separate regression for subgroups based on a particular practice characteristic, such as practice size. See Appendix 5.D for details of the models used for subgroup analyses.

## C. Power to detect effects

The impact analysis is well-powered to detect even small impacts on the primary outcome—total Medicare expenditures without CMS' enhanced payments. Based on the standard errors from the analyses of the practices that began CPC+ in 2017, the power to detect a non-zero effect if the true impact is equal to the CMF[62] ($15 in Track 1 and $28 in Track 2) is more than 99 percent for each track. Also, the smallest true effects that the study can detect with at least 80 percent power are $8.50 and $8.80 (approximately 1 percent) in Track 1 and Track 2, respectively. Power remains high when we analyze the SSP and non-SSP subgroups separately. (The power to detect non-zero impacts is at least 91 percent in Track 1 and 99 percent in Track 2 for each of the two subgroups, assuming true impacts equal to the size of the CMF.) Power for any other subgroup analysis that includes roughly half of the practices is similar to that of the SSP or non-SSP subgroups. To have 80 percent power for our strictest test of cost-neutrality (that

[61] CMS' approach for identifying high-risk beneficiaries differs from the approach we used in the impact analysis. Specifically, CMS includes the entire Medicare population in each CPC+ region and uses the region-specific distribution of HCC scores to identify the 75th and 90th percentiles of the distribution. In contrast, we identified the high-risk HCC cutoffs by looking at the distribution across all regions of 2016 HCC scores among Medicare FFS beneficiaries in our final analytic baseline sample.

[62] Our calculations are conservative in that they assess the power to detect an effect of the size of the CMF; we would have even better power to detect an effect of the size of all of CMS' enhanced payments combined (including the CPC+ CMFs and PBIPs, and the payments made to practices' ACOs for SSP shared savings).

is, to reject the null hypothesis that savings is less than the average CMF), there would need to be a true impact of at least $22.30 in Track 1 and $35.50 in Track 2. That is, if the true impact is roughly $7 greater than the CMF (of $15 in Track 1 and $28 in Track 2), we should have good power to detect savings greater than those fees.

### 5.2.5. Bayesian analysis

For the primary outcome of total Medicare expenditures without CMS' enhanced payments, we supplemented the main impact analysis with Bayesian analysis. As with the main analysis, we used a difference-in-differences regression model to estimate the impacts during the first year of CPC+ using data on practices that began CPC+ in 2017. We estimated the overall impact estimates within each track as a weighted average of subgroup-specific impacts, with weights equal to the relative sizes of the subgroups in the track.

The Bayesian paradigm offers two primary advantages over the main analysis described previously. First, it enables researchers to draw more intuitive, probabilistic conclusions through statements such as, "*There is a 60 percent chance that CPC+ reduced Medicare expenditures by 5 percent or more in Track 2*." Second, when estimating CPC+ impacts in subgroups of practices, it "borrows strength"—meaning it incorporates information from other subgroups. This method increases statistical power and provides a built-in correction for multiple comparisons; that is, it addresses the concern that, as we conduct more statistical tests, we are likely to observe some results that are statistically significant purely by chance, even if the initiative had no impacts. Because any individual subgroup estimate is determined partly by the whole set of subgroup estimates, anomalous results are effectively shrunk toward a value that is more consistent with other subgroup findings. In this report, we present the results of the Bayesian analysis using the probabilities of achieving enough saving to offset the care management fees Medicare paid for FFS beneficiaries in each track, which is the largest of CMS' enhanced payments. The probabilities of saving enough to offset CMFs and PBIPs CMS paid for CPC+, and shared savings payments for the ACOs of CPC+ practices that participate in SSP ACOs, were even lower. See Appendix 5.E for model details, including specification of the Bayesian prior distributions.

## 5.3. Year 1 results for 2017 starters in Track 1

For Track 1 practices, CPC+ had few effects on Medicare FFS beneficiaries' outcomes overall and few effects for those attributed to SSP and non-SSP practices separately. Specifically, comparing the change in outcomes between CPC+ and comparison practices from baseline to the first year of CPC+:

- There was no difference in total Medicare FFS expenditures without CMS' enhanced payments. This finding was robust to a variety of sensitivity tests and did not vary by patient- or practice-level subgroups.

- Bayesian estimates show that there is essentially zero probability that CPC+ Track 1 practices achieved savings equivalent to the average CMFs received by practices ($14 PBPM).[63]
- Total Medicare expenditures including all of CMS' enhanced payments increased by 2 percent more for CPC+ practices.
- Outpatient ED visits fell by 1 percent more for CPC+ practices.
- Ambulatory care visits to primary care practitioners increased by 1 percent less for CPC+ practices.
- There were small (about one percentage point or less) improvements for CPC+ practices in the planned care and population health measures for recommended services among beneficiaries with diabetes and for breast cancer screening.

The remainder of this section presents these findings in detail. We start by presenting findings for Medicare expenditures, including results from sensitivity tests and subgroup analyses, and then describe findings for Medicare service use and claims-based quality-of-care measures. (See Appendix 5.F for detailed estimates, including 90% confidence intervals and p-values.)

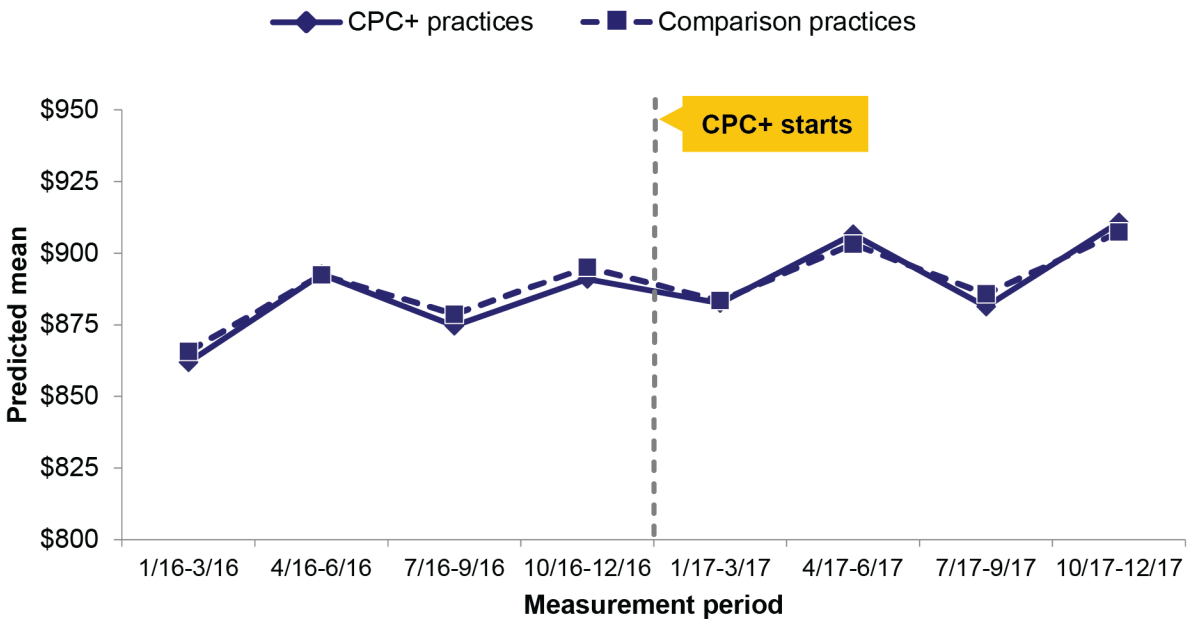
### 5.3.1. Expenditures for Medicare FFS Beneficiaries

#### A. Total Medicare expenditures without CMS' enhanced payments

**During Year 1, Track 1 of CPC+ had no discernible effect on Medicare FFS beneficiaries' expenditures when excluding CMS' enhanced payments.** Relative to expenditures among comparison practices, these expenditures among the CPC+ practices increased by less than 0.5 percent ($3 PBPM) and were not statistically significant ($p = 0.36$; Table 5.4). Findings were similar when we assessed SSP and non-SSP practices separately. In line with these results, CPC+ and comparison practices had similar quarterly trends in total Medicare expenditures without CMS' enhanced payments before and after CPC+ began (Figure 5.3). Bayesian analyses found that there was a less than 0.1 percent probability that savings in Medicare expenditures without CMS' enhanced payments were large enough to offset the average CMFs of $14. The probability that CPC+ saved enough in 2017 to offset CMFs and PBIPs paid for CPC+, and shared savings payments for the ACOs of CPC+ practices in SSP, was even lower.

[63] CMS paid practices in Track 1 an average CPC+ care management fee of $15 per month per attributed CPC+ beneficiary in Medicare FFS. This fee was higher than the average fee per month of $14 PBPM in our analysis sample, because (1) our ITT sample follows beneficiaries even after they are no longer attributed to a CPC+ practice and therefore the practice is no longer receiving CMFs for the Medicare FFS beneficiary, and (2) the list of practitioners and the attribution approach we use for the evaluation is slightly different from those used for payment. This finding applies to PBIPs and, for Track 2 CPCPs as well. Therefore, all our calculated PBPM payment amounts (for CMFs and PBIPs in both tracks, and CPCPs in Track 2) are lower than the CMS-reported numbers.

**Figure 5.3. Quarterly trends in mean Medicare FFS Part A and Part B expenditures PBPM, excluding CMS' enhanced payments, for Track 1 2017 Starters**




Source: Analyses of Medicare claims data from January 2013 through December 2017.

Notes: For CPC+ practices, the figure shows actual, unadjusted average expenditures for the attributed population. For comparison practices, the figure shows actual, unadjusted average expenditures in the baseline quarters and adjusted estimates of average expenditures in the intervention quarters. We obtain this adjusted mean by subtracting the regression-adjusted difference between the CPC+ and comparison means in each quarter (taken from the quarterly difference-in-differences model) from the CPC+ mean in that same quarter.

PBPM = per beneficiary per month.

## B. Total Medicare FFS expenditures by service category

**During Year 1, Medicare expenditures on ambulatory primary care visits increased slightly less among CPC+ practices in Track 1 than among comparison practices.** That is, these expenditures increased between 2016 and 2017 for both groups, but less so among the CPC+ practices that began CPC+ in 2017. The difference was small, $0.20 PBPM (roughly 1 percent; Table 5.4). This finding was similar by SSP status.

**Expenditures on hospice services increased more for CPC+ practices than for comparison practices.** Hospice expenditures increased by $1 PBPM (5 percent) more among CPC+ Track 1 practices than among comparison practices ($p < 0.01$). The relative increases were $1.50 PBPM (7 percent, $p < 0.01$) among practices in SSP, and $0.60 PBPM (3 percent) among those not in SSP (not statistically significant at the 10 percent level of significance [$p = 0.31$]). Consistent with this finding, we found the average length of hospice stay increased slightly from baseline to Year 1 (by 0.5 days) for CPC+ beneficiaries who used hospice during the year, while the average length of stay declined slightly (by 0.3 days) for comparison beneficiaries during the same period. However, CPC+ did not affect the likelihood of using hospice services, as we discuss in Section 5.3.3. In other words, the small relative increase in hospice expenditures seems to have been driven by a differential increase in the length of hospice use among CPC+

beneficiaries versus comparison beneficiaries, and not by an increase in the percentage of beneficiaries who used hospice.

**Among all Track 1 practices that began CPC+ in 2017, there were no discernible effects on Medicare FFS expenditures for any of the other service categories in Year 1.** Relative to the comparison practices, inpatient expenditures increased by $2 PBPM (less than 1 percent) for all Track 1 CPC+ practices and by $5 PBPM (2 percent) among non-SSP practices, but these differences were not statistically significant ($p = 0.32$ and 0.18, respectively). The lack of effects on Medicare expenditures overall (excluding CMS' enhanced payments) in Track 1 reflects the absence of any meaningful effects on the biggest expenditure categories—inpatient expenditures (35 percent of total expenditures among CPC+ practices at baseline), expenditures on Part B noninstitutional services (29 percent), and outpatient expenditures (19 percent) (see Figure 5.2), as well as the fact that the two effects that we did observe were small and in opposite directions. Expenditures on ambulatory primary care visits fell, and hospice expenditures rose.

## C. Total Medicare expenditures including CMS' enhanced payments (CMFs, PBIPs, and SSP payments)

**CPC+ increased net costs.** For Track 1, after including Medicare CMFs for Medicare FFS beneficiaries, total Medicare expenditures in Year 1 increased more among CPC+ practices than among comparison practices. The difference-in-differences estimate was a statistically significant $17 PBPM (2 percent; $p < 0.01$). SSP and non-SSP practices in Track 1 experienced similar increases of 2 percent—$14 and $20 PBPM, respectively—in total Medicare expenditures including CMFs, relative to the comparison group. After including CMFs and PBIPs as well as the shared savings payments received by SSP ACOs, the estimated increase in net costs was slightly higher, at $18 PBPM (2 percent) for all Track 1, relative to comparison practices ($p < 0.01$); among non-SSP practices (which are eligible to receive PBIPs), the estimated increase was $21 PBPM (2.5 percent; $p < 0.01$). Among SSP practices (whose ACOs are eligible to receive SSP ACO shared savings), the relative increase was $14 PBPM (1.5 percent; $p < 0.01$).

## Table 5.4. Regression-adjusted means and estimated impact of CPC+ on selected Medicare expenditure outcomes for attributed Medicare FFS beneficiaries during Year 1: Track 1 2017 Starters

| | Track 1–Overall | | | | Track 1–SSP | | | | Track 1–Non-SSP | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] |
| **Medicare expenditures (PBPM)** | | | | | | | | | | | | |
| **Total Medicare Part A and B expenditures excluding CMS' enhanced payments** | | | | | | | | | | | | |
| Baseline | $880 | $883 | NA | NA | $906 | $904 | NA | NA | $854 | $861 | NA | NA |
| Year 1 | $882 | $882 | $3.1 | 0.3% | $906 | $905 | -$0.1 | 0.0% | $857 | $857 | $6.4 | 0.7% |
| **Total Medicare Part A and B expenditures including CPC+ CMFs** | | | | | | | | | | | | |
| Baseline | $880 | $883 | NA | NA | $906 | $904 | NA | NA | $854 | $861 | NA | NA |
| Year 1 | $896 | $882 | $16.9*** | 1.9%*** | $920 | $905 | $13.9*** | 1.5%*** | $870 | $857 | $20.1*** | 2.3%*** |
| **Total Medicare Part A and B expenditures including CPC+ CMFs and PBIPs** | | | | | | | | | | | | |
| Baseline | $880 | $883 | NA | NA | NA | NA | NA | NA | $854 | $861 | NA | NA |
| Year 1 | $897 | $882 | $17.5*** | 2.0%*** | NA | NA | NA | NA | $872 | $857 | $21.4*** | 2.5%*** |
| **Total Medicare Part A and B expenditures including CPC+ CMFs, PBIPs, and shared savings payments to SSP ACOs[b]** | | | | | | | | | | | | |
| Baseline | $883 | $885 | NA | NA | $910 | $908 | NA | NA | NA | NA | NA | NA |
| Year 1 | $899 | $884 | $17.7*** | 2.0%*** | $926 | $909 | $14.1*** | 1.5%*** | NA | NA | NA | NA |
| **Medicare expenditures by service category (PBPM)** | | | | | | | | | | | | |
| **Inpatient expenditures** | | | | | | | | | | | | |
| Baseline | $311 | $318 | NA | NA | $318 | $322 | NA | NA | $303 | $314 | NA | NA |
| Year 1 | $310 | $315 | $2.3 | 0.7% | $317 | $320 | $0.2 | 0.1% | $302 | $309 | $4.6 | 1.5% |
| **Outpatient expenditures** | | | | | | | | | | | | |
| Baseline | $165 | $169 | NA | NA | $164 | $168 | NA | NA | $167 | $171 | NA | NA |
| Year 1 | $171 | $175 | $0.2 | 0.1% | $170 | $174 | $0.3 | 0.2% | $172 | $177 | $0.1 | 0.1% |
| **Expenditures on physician and nonphysician Part B noninstitutional services in any setting** | | | | | | | | | | | | |
| Baseline | $253 | $242 | NA | NA | $268 | $254 | NA | NA | $238 | $229 | NA | NA |
| Year 1 | $255 | $244 | -$0.3 | -0.1% | $269 | $256 | -$1.5 | -0.6% | $241 | $231 | $1.0 | 0.4% |
| **Expenditures on ambulatory visits with primary care physicians** | | | | | | | | | | | | |
| Baseline | $24 | $25 | NA | NA | $24 | $25 | NA | NA | $24 | $24 | NA | NA |
| Year 1 | $25 | $25 | -$0.2** | -0.8%** | $25 | $26 | -$0.2 | -0.8% | $24 | $25 | -$0.2 | -0.8% |
| **Expenditures on ambulatory visits with specialists** | | | | | | | | | | | | |
| Baseline | $26 | $25 | NA | NA | $29 | $26 | NA | NA | $24 | $23 | NA | NA |
| Year 1 | $26 | $24 | $0.0 | 0.1% | $28 | $26 | -$0.2* | -0.6%* | $23 | $22 | $0.2** | 0.9%** |
| **Skilled nursing home expenditures** | | | | | | | | | | | | |
| Baseline | $67 | $68 | NA | NA | $71 | $72 | NA | NA | $63 | $64 | NA | NA |
| Year 1 | $64 | $65 | $0.3 | 0.5% | $68 | $69 | $0.0 | 0.1% | $60 | $60 | $0.5 | 0.8% |

**Table 5.4.** ***(continued)***

| | Track 1–Overall | | | | Track 1–SSP | | | | Track 1–Non-SSP | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] |
| **Home health expenditures** | | | | | | | | | | | | |
| Baseline | $39 | $41 | NA | NA | $40 | $44 | NA | NA | $39 | $38 | NA | NA |
| Year 1 | $38 | $40 | -$0.3 | -0.9% | $38 | $42 | -$0.2 | -0.4% | $37 | $37 | -$0.5 | -1.4% |
| **Hospice expenditures** | | | | | | | | | | | | |
| Baseline | $23 | $24 | NA | NA | $22 | $25 | NA | NA | $23 | $23 | NA | NA |
| Year 1 | $24 | $24 | $1.1*** | 4.6%*** | $24 | $25 | $1.5*** | 6.5%*** | $24 | $24 | $0.6 | 2.6% |
| **Durable medical equipment expenditures** | | | | | | | | | | | | |
| Baseline | $22 | $21 | NA | NA | $22 | $20 | NA | NA | $22 | $21 | NA | NA |
| Year 1 | $20 | $19 | -$0.1 | -0.3% | $20 | $19 | -$0.3 | -1.6% | $21 | $20 | $0.2 | 1.0% |
| **Sample sizes** | | | | | | | | | | | | |
| Number of practices | 1,373 | 5,247 | | | 738 | 2,981 | | | 635 | 2,266 | | |
| Number of beneficiaries | 1,039,783 | 3,455,337 | | | 536,943 | 2,012,629 | | | 504,756 | 1,453,322 | | |
| Number of beneficiary-years | 1,771,336 | 5,859,953 | | | 910,522 | 3,409,405 | | | 860,814 | 2,450,548 | | |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Notes: Impact estimates are regression-adjusted for pre-CPC+ beneficiary characteristics and practice fixed effects. Each impact estimate is based on a difference-in-differences analysis and reflects the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in Year 1 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. Expenditures on Part B noninstitutional services include expenditures on ambulatory primary care visits, ambulatory specialist visits, and non-ambulatory physician visits as well as services provided by other noninstitutional providers (the third category is not shown separately).

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources.

[a] We calculated percentage impacts relative to what the CPC+ mean would have been in Year 1 in the absence of the intervention—that is, the unadjusted CPC+ mean minus the impact estimate.

[b] Impact estimates are not provided for the practices that are not in SSP, because those practices are not affected by SSP payments.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

ACO = accountable care organization; C = comparison; CMF = care management fee; FFS = fee-for-service; MDM = master data management; NA = not applicable; PBIP = Performance-based Incentive Payment; PBPM = per beneficiary per month; SSP = Medicare Shared Savings Program.

## D. Results of sensitivity tests for impact estimates on total Medicare FFS expenditures without CMS' enhanced payments

**Results from sensitivity tests were similar to those from our main model for Track 1 practices.** The Year 1 impact estimate for our primary outcome (FFS beneficiaries' total Medicare expenditures without CMS' enhanced payments) was similar across different modeling approaches. For example, we obtained similar estimates when we varied the (1) length of the baseline period, (2) composition of the analysis sample, (3) outcome definition, and (4) model specification (Table 5.5). Impact estimates were close to zero in most of these sensitivity tests, suggesting that findings from the main analysis for Track 1 practices are robust to changing the modeling approach or the sample composition.

### Table 5.5. Estimates of the Year 1 impact on Medicare FFS expenditures without CMS' enhanced payments for Track 1 2017 Starters, from main analysis and sensitivity tests

| Test | Motivation | Impact estimate | Percentage impact | *p*-Value | 90% CI lower bound | 90% CI upper bound |
|---|---|---|---|---|---|---|
| **Main analysis** | | **$3.1** | **0.3%** | **0.36** | **-$2.4** | **$8.6** |
| Use two-year baseline (instead of one year) | Controls for outcome levels over longer pre-CPC+ period | $4.7 | 0.5% | 0.13 | -$0.4 | $9.8 |
| Use sample of beneficiaries attributed during the intervention, and control for their baseline characteristics and outcomes, instead of using a separate baseline sample | Helps to adjust for changes in sample composition between baseline and follow-up that may differ for the intervention and comparison groups | -$0.6 | -0.1% | 0.87 | -$6.3 | $5.2 |
| Use generalized linear model with log link | Handles skewed expenditure distribution | $4.2 | 0.5% | 0.47 | -$5.3 | $13.8 |
| Trim costs at 98th percentile | Reduces influence of high-cost beneficiaries | $2.2 | 0.3% | 0.39 | -$2.0 | $6.4 |
| Use log costs[a] | Reduces influence of high-cost beneficiaries | - | -0.06% | 0.85 | -0.6% | 0.5% |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

[a] We obtained only a percentage impact, not a dollar impact, from the model specification with log of total expenditures as the outcome.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

CI = confidence interval.

## E. Results for subgroups of practices and beneficiaries for impact estimates on total Medicare expenditures without CMS' enhanced payments

### Findings from practice subgroup analysis

**For Track 1, the effect on Medicare expenditures did not vary by baseline practice characteristics.** Track 1 of CPC+ did not appear to have different effects across subgroups on FFS beneficiaries' Medicare expenditures without CPC+ payments (Table 5.6).[64] The impact estimate in the hospital or system-owned subgroup was unfavorable, suggesting an $8 PBPM relative increase for CPC+ versus comparison practices that were hospital or system-owned (statistically significant at the 10 percent level [$p = 0.09$] as denoted by an asterisk (*) in the table). However, the impact estimate for hospital or system-owned practices ($8 PBPM) and the impact estimate for practices not owned by a hospital or health system (-$3 PBPM) were not significantly different from each other ($p = 0.11$). Moreover, given the number of tests for practice subgroup differences, as Table 5.7 shows, one statistically significant impact estimate would be expected to occur due to chance alone. Also, this estimate was small in percentage terms—just under 1 percent. Therefore, the findings from this subgroup analysis do not provide strong evidence of impacts varying by hospital or system ownership, or by any other baseline practice characteristic. We will continue to monitor impacts in the subgroup of hospital- or system-owned practices in future reports to see if the differential findings for this subgroup continue over time, as well as in the other subgroups to see if effects emerge.

**Table 5.6. Variation in Year 1 impact on Medicare FFS expenditures without CMS' enhanced payments, by baseline practice characteristics among Track 1 2017 Starters**

| Practice subgroup definition, based on baseline characteristics | Impact estimate (standard error) | Percentage impact | *p*-Value for difference in impact estimates between subgroups |
|---|---|---|---|
| **Main analysis (all practices)** | **$3.1 ($3.4)** | **0.3%** | **-** |
| **Whether practice participated in prior primary care transformation initiatives (recognized as a medical home or participated in MAPCP or CPC Classic)** | | | |
| Yes | $6.0 ($4.7) | 0.7% | |
| No | -$0.8 ($4.9) | -0.1% | 0.33 |
| **Large and medium, versus small practice based on number of primary care practitioners** | | | |
| Large (6+ primary care practitioners) | -$1.5 ($6.1) | -0.2% | |
| Medium (3–5 primary care practitioners) | $8.7 ($7.3) | 1.0% | |
| Small (1–2 primary care practitioners) | $3.9 ($8.0) | 0.4% | 0.11 |
| **Whether hospital- or system-owned** | | | |
| Yes | $7.9* ($4.6) | 0.9% | |
| No | -$3.1 ($5.0) | -0.3% | 0.11 |

[64] From a joint test of significance, we were unable to reject the hypothesis that—considered together—all the subgroup-specific triple interaction terms (subgroup interacted with CPC+ and Year 1 indicators), testing for differential effects of CPC+ by subgroup, were jointly equal to zero ($p = 0.25$).

**Table 5.6.** ***(continued)***

| Practice subgroup definition, based on baseline characteristics | Impact estimate (standard error) | Percentage impact | *p*-Value for difference in impact estimates between subgroups |
|---|---|---|---|
| **Whether practice attested to meaningful use[a] early (2011–2012)** | | | |
| Yes | $1.5 ($3.7) | 0.2% | |
| No | $8.0 ($8.2) | 0.9% | 0.47 |
| **Whether the practice is multispecialty versus primary care only** | | | |
| Yes | $13.7 ($8.6) | 1.6% | |
| No | $0.2 ($3.7) | 0.0% | 0.16 |
| **Urbanicity of practice's county: rural or suburban location versus urban location** | | | |
| Rural | $0.7 ($10.7) | 0.1% | |
| Suburban | $1.9 ($7.2) | 0.2% | |
| Urban | $3.3 ($4.1) | 0.4% | 0.97 |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Note: The estimates (and standard errors) in the impact estimate column show subgroup-specific impacts, separately for each practice characteristic listed in the table. The *p*-values in the last column represent results from testing for statistically significant differences in impact estimates between the subgroups, based on the same baseline practice characteristic. The *p*-values are from a t-test for subgroups with two categories and from an F-test for subgroups with more than two categories.

[a] Practice is considered to have meaningful use of an EHR if at least one practitioner within the practice attested to meaningful use under the CMS Medicare EHR Incentive Program.

*/**/***Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

EHR = electronic health record; MAPCP = Multi-payer Advanced Primary Care Practice Demonstration.

## Findings from beneficiary subgroup analysis

**There was no variation by baseline beneficiary characteristics in the impact on our primary outcome measure (total Medicare FFS expenditures without CMS' enhanced payments).** There were no statistically significant subgroup-specific impacts or significant differences between high-risk and non-high-risk beneficiary subgroups, based on beneficiaries (1) being in the top quartile of the HCC score distribution, (2) being in the top decile of the HCC score distribution or having dementia, (3) having behavioral health conditions, (4) having two or more chronic conditions and a hospitalization in the prior year, or (5) being dually eligible (Table 5.7). In other words, Track 1 of CPC+ did not have a differential effect on high-risk beneficiaries under any of the definitions of high risk.

## Table 5.7. Variation in Year 1 impact on Medicare FFS expenditures without CMS' enhanced payments, by baseline beneficiary characteristics among Track 1 2017 Starters

| Beneficiary subgroup definition, based on baseline characteristics | Impact estimate (standard error) | Percentage impact | *p*-Value for difference in impact estimates between subgroups |
|---|---|---|---|
| **Main analysis (all beneficiaries)** | **$3.1 ($3.4)** | **0.3%** | **-** |
| **Patients in the highest quartile of the HCC score distribution** | | | |
| Yes | $3.6 ($10.3) | 0.2% | |
| No | $3.1 ($2.9) | 0.5% | 0.96 |
| **Patients who are either in the highest decile of the HCC score distribution or have dementia** | | | |
| Yes | -$0.9 ($14.3) | 0.0% | |
| No | $4.0 ($3.0) | 0.6% | 0.74 |
| **Patients with selected behavioral health conditions (schizophrenia, depression and bipolar disorders, and drug/alcohol psychosis or dependence)** | | | |
| Yes | -$3.0 ($13.8) | -0.2% | |
| No | $3.8 ($3.4) | 0.5% | 0.63 |
| **Patients with multiple chronic conditions (at least 2 of 12 frequently occurring chronic conditions[a]), who also had one or more hospitalizations in the prior year** | | | |
| Yes | $9.0 ($22.5) | 0.3% | |
| No | $2.2 ($3.1) | 0.3% | 0.76 |
| **Patients who are dually eligible for Medicare and Medicaid** | | | |
| Yes | -$12.1 ($11.3) | -1.0% | |
| No | $5.1 ($3.4) | 0.6% | 0.14 |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Note: Beneficiary characteristics to determine subgroup membership are measured at the start of the year-long baseline period for baseline observations and the start of Year 1 for Year 1 observations. The estimates (and standard errors) in the impact estimate column show subgroup-specific impacts, separately for each beneficiary characteristic listed in the table. The *p*-value in the last column reflects results from testing for statistically significant differences in impact estimates between the subgroups, based on the same baseline beneficiary characteristic.

[a] The 12 frequently occurring chronic conditions are congestive heart failure, chronic obstructive pulmonary disease, history of acute myocardial infarction, ischemic heart disease, diabetes, severe cancer, history of stroke, depression, dementia, atrial fibrillation, rheumatoid arthritis or osteoarthritis, and chronic kidney disease.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

HCC = hierarchical condition category.

### 5.3.2. Medicare FFS service use

**In Year 1, CPC+ was associated with a small reduction in ED visits among beneficiaries attributed to Track 1 CPC+ practices, relative to beneficiaries attributed to comparison practices.** ED visits declined from baseline to Year 1 among both CPC+ and comparison practices, with larger and statistically significant reductions in CPC+ practices than in the comparison practices in both annualized total ED visits and annualized outpatient ED visits by 1 percent each, or, by approximately 8 and 6 visits per 1000, respectively ($p < 0.01$ in each case) (Table 5.8). This pattern of relative reduction was similar in size for SSP and non-SSP practices.

**CPC+ Track 1 was also associated with lower rates of growth in ambulatory primary care visits, relative to comparison practices.** Annualized ambulatory primary care visits increased by less for the CPC+ Track 1 practices relative to the comparison group by a statistically significant 74 visits per 1,000 beneficiaries (1.6 percent, $p < 0.01$). These findings were similar by SSP status. The reduction in ambulatory primary care visits is in line with the 1 percent reduction in expenditures on such visits described above.

**Track 1 CPC+ practices participating in SSP experienced slightly larger reductions in hospitalizations and specialist visits than comparison practices in SSP, but the estimates were small.** Track 1 practices in SSP had greater declines in annualized hospitalizations and specialist visits than comparison practices by 3 stays and 31 visits per 1,000 beneficiaries, respectively (1.2 and 0.6 percent; $p = 0.08$ and $p = 0.03$, respectively). These estimates were smaller and not statistically significant for all Track 1 practices combined and for non-SSP practices.

## Table 5.8. Regression-adjusted means and estimated impact of CPC+ on selected Medicare service use outcomes for attributed Medicare FFS beneficiaries during Year 1: Track 1 2017 Starters

| | Track 1 – Overall | | | | Track 1 – SSP | | | | Track 1 – Non-SSP | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] |
| **Service use (per 1,000 beneficiaries per year)** | | | | | | | | | | | | |
| **Acute hospitalizations (short-stay acute care and CAHs)** | | | | | | | | | | | | |
| Baseline | 285 | 283 | NA | NA | 285 | 283 | NA | NA | 285 | 283 | NA | NA |
| Year 1 | 279 | 279 | -1.2 | -0.4% | 279 | 280 | -3.4* | -1.2%* | 280 | 277 | 1.2 | 0.4% |
| **Total ED visits, including observation stays** | | | | | | | | | | | | |
| Baseline | 703 | 701 | NA | NA | 690 | 687 | NA | NA | 717 | 716 | NA | NA |
| Year 1 | 686 | 692 | -7.8*** | -1.1%*** | 672 | 678 | -8.9** | -1.3%** | 701 | 707 | -6.4 | -0.9% |
| **Outpatient ED visits, including observation stays** | | | | | | | | | | | | |
| Baseline | 492 | 497 | NA | NA | 475 | 478 | NA | NA | 509 | 517 | NA | NA |
| Year 1 | 478 | 489 | -6.1*** | -1.2%*** | 462 | 471 | -5.9** | -1.2%** | 496 | 510 | -6.0* | -1.2%* |
| **Ambulatory primary care visits (including to FQHCs, RHCs, and CAHs)** | | | | | | | | | | | | |
| Baseline | 4,482 | 4,626 | NA | NA | 4,415 | 4,624 | NA | NA | 4,554 | 4,627 | NA | NA |
| Year 1 | 4,507 | 4,724 | -74.0*** | -1.6%*** | 4,447 | 4,725 | -68.2*** | -1.5%*** | 4,569 | 4,722 | -79.7*** | -1.7%*** |
| **Ambulatory specialty care visits (including to FQHCs, RHCs, and CAHs)** | | | | | | | | | | | | |
| Baseline | 4,752 | 4,552 | NA | NA | 5,084 | 4,781 | NA | NA | 4,404 | 4,303 | NA | NA |
| Year 1 | 4,644 | 4,452 | -8.2 | -0.2% | 4,959 | 4,687 | -30.9** | -0.6%** | 4,312 | 4,194 | 15.8 | 0.4% |
| **Sample sizes** | | | | | | | | | | | | |
| Number of practices | 1,373 | 5,247 | | | 738 | 2,981 | | | 635 | 2,266 | | |
| Number of beneficiaries | 1,039,783 | 3,455,337 | | | 536,943 | 2,012,629 | | | 504,756 | 1,453,322 | | |
| Number of beneficiary-years | 1,771,336 | 5,859,953 | | | 910,522 | 3,409,405 | | | 860,814 | 2,450,548 | | |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Notes: Impact estimates are regression-adjusted for pre-CPC+ beneficiary characteristics and practice fixed effects. Each impact estimate is based on a difference-in-differences analysis and reflects the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in Year 1 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. For Medicare service use measures, measures of outpatient ED visits and total ED visits include observation stays. Ambulatory visits with primary care practitioners and specialists include office-based visits, visits at home, as well as visits in other settings, such as FQHCs, RHCs, and CAHs.

This table indicates which estimates are statistically significant; when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources.

[a] We calculated percentage impacts relative to what the CPC+ mean would be in Year 1 in the absence of the intervention—that is, the unadjusted CPC+ mean minus the impact estimate.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

C = comparison; CAH = critical access hospital; ED = emergency department; FQHC = federally qualified health center; NA = not applicable; RHC = rural health center; SSP = Medicare Shared Savings Program.

### 5.3.3. Claims-based quality of care

#### A. Planned care and population health measures

**CPC+ practices in Track 1 had only small improvements relative to the comparison group in the percentage of beneficiaries with diabetes receiving recommended services.** The sizes of these impact estimates—one percentage point or less—do not suggest a substantive quality-of-care improvement in terms of the increased number of beneficiaries receiving services. Specifically, from baseline to the first year, among patients with diabetes attributed to CPC+ practices relative to their comparison counterparts (Table 5.9):

- The likelihood of receiving an eye exam increased by one percentage point ($p < 0.01$).
- The likelihood of receiving attention for nephropathy increased by 0.7 percentage points ($p < 0.01$).
- The likelihood of receiving all three recommended tests increased by 0.8 percentage points ($p < 0.01$).
- The likelihood of receiving none of the three tests declined by 0.2 percentage points ($p = 0.018$).

These estimates pointed toward modest increases in the additional number of beneficiaries receiving these services. For example, based on these impact estimates and the number of beneficiaries with diabetes in Year 1 among Track 1 practices (107,277), an additional 1,081 beneficiaries received an eye exam, and an additional 909 beneficiaries received all three tests. Most of these favorable changes were concentrated among the non-SSP practices, including the improvement in the first diabetes composite measure of receiving all three recommended tests. The rates of these tests in the baseline period were slightly smaller (generally, by 1 to 4 percentage points) among the non-SSP practices relative to the SSP practices, so there may have been more room for improvement among non-SSP practices for these measures. However, the favorable change in the second diabetes composite measure (defined as not receiving any of the three tests) occurred among both SSP and non-SSP practices, and was statistically significant among SSP practices only. There was no change in HbA1c testing overall or by SSP status—which was already performed at high rates (over 91 percent) during the baseline year in both the CPC+ and comparison groups, so it will be difficult for practices to improve substantially on this measure.

**CPC+ was also associated with a slight improvement in breast cancer screening**. Relative to their comparison counterparts, there was a greater increase in breast cancer screening among Track 1 practices overall (by 0.4 percentage points) and among non-SSP practices (by 0.8 percentage points) ($p < 0.01$ in each case). For Track 1 overall, the impact estimate suggests a relative increase of 860 beneficiaries receiving breast cancer screening, out of a possible 203,779 female beneficiaries ages 52 to 74.

The magnitudes of estimated improvements in Year 1 in the planned care and population health measures for recommended diabetes services and breast cancer screening for CPC+ Track 1 practices are small. In the absence of additional data points or estimates for a broader set of quality measures, these results do not constitute strong evidence of a substantive quality

improvement driven by CPC+. We will continue to monitor these estimates in subsequent annual reports to see if these favorable findings persist.

## B. Measure for coordination of care

**There were no sizable or statistically significant effects on the claims-based measure of coordination of care that we examined. Specifically, for Track 1, the impact estimate was zero for the rate of unplanned readmissions within 30 days of a hospital discharge.**

## C. Measures for patient and caregiver engagement

**There were no discernible effects on claims-based measures of patient and caregiver engagement in Track 1 overall, but we observed small changes for the hospice use measure among SSP practices and for the advance care plan visit measure among non-SSP practices.** CPC+ practices are expected to better engage patients and caregivers in planning and making decisions on health care use, including the use of end-of-life care. Therefore, we examined two claims-based measures that might increase under CPC+—use of hospice services and advance care planning during physician visits. Given that they focus on end-of-life care, both measures had low rates of use of less than 3 percent (for hospice) and 3 to 4 percent (for advance care plan visits) among beneficiaries in CPC+ practices in Track 1. On the hospice measure—proportion of beneficiaries with any use of hospice services during the year—there was a small increase of 0.1 percentage points only among Track 1 practices in SSP ($p = 0.03$), relative to the comparison group. On the advance care plan visit measure, we had an unfavorable finding: among non-SSP practices, comparison practices had a larger increase of nearly one percentage point in having a visit with advance care planning than was observed for CPC+ practices. This small, unfavorable result seems to be driven by a large difference in this measure at baseline, with the CPC+ practices providing advance care plan visits at double the rate of the comparison practices in 2016, the year before CPC+ began. This finding may have limited the opportunity for improvement on this measure in the CPC+ group between the baseline and intervention periods. Another reason for this unfavorable finding could be the ability of comparison practices to bill for advance care planning as an optional component of CCM services, unlike CPC+ practices, which are not allowed to bill for CCM services for their attributed beneficiaries. Accordingly, the use of CCM services among comparison beneficiaries between baseline and Year 1 increased by one percentage point, while the use of CCM services declined by half a percentage point among CPC+ beneficiaries in Track 1 (see Appendix 5.G).

We also examined whether CPC+ affected 12-month mortality. For Track 1, we found that mortality rates were similar, around 3.6 percent, for beneficiaries in CPC+ practices and for those in comparison practices during the baseline period and Year 1, resulting in an estimated effect close to zero.

## Table 5.9. Regression-adjusted means and estimated impact of CPC+ on selected claims-based quality-of-care measures for attributed Medicare FFS beneficiaries during Year 1: Track 1 2017 Starters

| | Track 1 – Overall | | | Track 1 – SSP | | | Track 1 – Non-SSP | | |
|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | CPC+ mean | C mean | Impact estimate | CPC+ mean | C mean | Impact estimate |
| **Planned care and population health measures for beneficiaries ages 18–75 with diabetes (percentage)** | | | | | | | | | |
| **Received HbA1c test** | | | | | | | | | |
| Baseline | 91.1% | 91.7% | NA | 92.2% | 92.3% | NA | 90.0% | 91.1% | NA |
| Year 1 | 90.8% | 91.5% | -0.1 | 91.8% | 92.1% | -0.2 | 89.7% | 90.8% | 0.0 |
| **Received eye exam** | | | | | | | | | |
| Baseline | 62.3% | 62.9% | NA | 63.0% | 64.6% | NA | 61.6% | 61.0% | NA |
| Year 1 | 62.5% | 62.1% | 1.0*** | 62.8% | 64.0% | 0.4 | 62.2% | 60.1% | 1.6*** |
| **Received attention for nephropathy** | | | | | | | | | |
| Baseline | 81.4% | 81.4% | NA | 83.1% | 82.1% | NA | 79.7% | 80.6% | NA |
| Year 1 | 81.7% | 81.0% | 0.7*** | 83.2% | 81.9% | 0.3 | 80.2% | 80.1% | 1.1*** |
| **Diabetes composite measure 1 (received all three tests above: HbA1c test, eye exam, attention for nephropathy)** | | | | | | | | | |
| Baseline | 50.2% | 50.7% | NA | 52.2% | 52.7% | NA | 48.1% | 48.7% | NA |
| Year 1 | 50.3% | 50.0% | 0.8*** | 51.7% | 52.2% | -0.1 | 48.9% | 47.7% | 1.8*** |
| **Diabetes composite measure 2 (received none of the three tests above)** | | | | | | | | | |
| Baseline | 2.3% | 2.2% | NA | 2.1% | 2.0% | NA | 2.6% | 2.4% | NA |
| Year 1 | 2.3% | 2.3% | -0.2** | 2.0% | 2.1% | -0.2** | 2.6% | 2.5% | -0.2 |
| **Sample sizes for the diabetes measures** | | | | | | | | | |
| Number of beneficiaries | 136,656 | 455,268 | | 69,176 | 259,547 | | 67,694 | 196,830 | |
| Number of beneficiary-years | 211,445 | 701,299 | | 106,706 | 399,772 | | 104,739 | 301,527 | |
| **Planned care and population health measures for female beneficiaries ages 52–74 years (percentage)** | | | | | | | | | |
| **Received breast cancer screening** | | | | | | | | | |
| Baseline | 72.5% | 73.1% | NA | 73.5% | 73.9% | NA | 71.4% | 72.2% | NA |
| Year 1 | 73.3% | 73.5% | 0.4*** | 74.2% | 74.5% | 0.1 | 72.4% | 72.4% | 0.8*** |
| **Sample sizes for the breast cancer screening measure** | | | | | | | | | |
| Number of beneficiaries | 248,926 | 819,120 | | 128,127 | 475,297 | | 121,248 | 346,253 | |
| Number of beneficiary-years | 399,427 | 1,308,956 | | 204,664 | 758,423 | | 194,763 | 550,533 | |
| **Measures for coordination of care (percentage)** | | | | | | | | | |
| **30-day all-cause unplanned readmissions** | | | | | | | | | |
| Baseline | 15.4% | 15.6% | NA | 15.3% | 15.7% | NA | 15.5% | 15.5% | NA |
| Year 1 | 15.4% | 15.6% | 0.0 | 15.1% | 15.5% | 0.0 | 15.8% | 15.8% | 0.0 |

**Table 5.9.** ***(continued)***

| | Track 1 – Overall | | | Track 1 – SSP | | | Track 1 – Non-SSP | | |
|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | CPC+ mean | C mean | Impact estimate | CPC+ mean | C mean | Impact estimate |
| **Measures for patient and caregiver engagement (percentage)** | | | | | | | | | |
| **Received hospice services** | | | | | | | | | |
| Baseline | 2.7% | 2.7% | NA | 2.7% | 2.7% | NA | 2.8% | 2.7% | NA |
| Year 1 | 2.7% | 2.7% | 0.0 | 2.7% | 2.7% | 0.1** | 2.8% | 2.6% | 0.0 |
| **Had an advance care plan visit** | | | | | | | | | |
| Baseline | 2.7% | 1.8% | NA | 2.6% | 2.1% | NA | 2.9% | 1.4% | NA |
| Year 1 | 3.6% | 3.1% | -0.4 | 3.8% | 3.4% | 0.0 | 3.4% | 2.8% | -0.8* |
| **Sample sizes for unplanned readmission, receiving hospice services, and having an advance care plan visit** | | | | | | | | | |
| Number of index discharges for readmissions | 427,945 | 1,385,954 | | 219,539 | 804,069 | | 208,406 | 581,885 | |
| Number of beneficiaries | 1,039,783 | 3,455,337 | | 536,943 | 2,012,629 | | 504,756 | 1,453,322 | |
| Number of beneficiary-years | 1,771,336 | 5,859,953 | | 910,522 | 3,409,405 | | 860,814 | 2,450,548 | |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Notes: Impact estimates are regression-adjusted for baseline beneficiary characteristics and practice fixed effects. Each impact estimate is based on a difference-in-differences analysis and reflects the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in the intervention year compared with the average outcome in the baseline year, relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. For the readmissions outcome, which is estimated at the discharge level, we also controlled for discharge-level risk factors. For the binary quality-of-care outcomes, we present the absolute impact estimate only in percentage points. We do so because percentage impacts for some of the outcomes are likely to be misleadingly large, given the low means for the outcome measures.

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources.

We grouped the claims-based quality-of-care measures into four domains according to the CPC+ function where they are covered in the 2018 Implementation Guide (CMMI 2018).

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

C = comparison; FFS = fee-for-service; NA = not applicable; SSP = Medicare Shared Savings Program.

### 5.3.4. Aggregate impacts on key outcomes

We present aggregate impacts in Year 1 across all Medicare FFS beneficiaries assigned to Track 1 practices that started in 2017, for four outcome measures: (1) total Medicare expenditures without CMS' enhanced payments (2) number of hospitalizations, (3) number of outpatient ED visits, and (4) 30-day unplanned readmissions. For the first three outcomes, we used the beneficiary-level estimates from the difference-in-differences regressions, together with the total FFS eligible months for beneficiaries assigned to Track 1 practices in Year 1, to obtain the aggregate impacts as well as the 90 percent confidence intervals for these impacts. For readmissions, we used the discharge-level estimates and the total discharges for all assigned beneficiaries in Track 1 practices to obtain the aggregate impacts. The only statistically significant aggregate estimate was a relative reduction of 5,022 outpatient ED visits in Year 1 (Table 5.10).

**Table 5.10. Aggregate impacts on key outcomes: Track 1 2017 Starters**

| Outcome | Estimate | 90 percent CI lower bound | 90 percent CI upper bound |
|---|---|---|---|
| Total Medicare expenditures without CMS' enhanced payments | $32,916,255 | -$21,518,814 | $87,351,324 |
| Hospitalizations | -1,001 | -3,046 | 1,044 |
| Outpatient ED visits | ***-5,022*** | -8,100 | -1,943 |
| 30-day readmissions | 58 | -475 | 590 |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Note: This table calculates the estimated effects over all attributed Medicare FFS beneficiaries who were in the intent-to-treat analysis sample for Year 1 of CPC+. The total number of beneficiaries attributed to Track 1 practices in the annual analysis sample was 896,510 in Year 1. These beneficiaries had 9,955,168 eligible beneficiary months, and 218,394 eligible index discharges (for readmissions). Impact estimates are from difference-in-differences regressions using practice fixed effects and patient-level control variables from the pre-CPC+ period. See Section 5.2 for a full list of measures and definitions, as well as a discussion of methods. **Yellow shading** ***with bold, italicized text*** signifies that estimate was statistically significant at the $p < 0.10$ level.

CI = confidence interval; ED = emergency department; FFS = fee-for-service.

## 5.4. Year 1 results for 2017 Starters in Track 2

Track 2 results were very similar to results in Track 1 and, as in Track 1, were generally similar for SSP and non-SSP practices. In Track 2, comparing the change in outcomes between Medicare FFS beneficiaries attributed to CPC+ practices and those attributed to comparison practices from baseline to Year 1:

- There was no difference in total Medicare FFS expenditures without CMS' enhanced payments.[65] This finding was robust to a variety of sensitivity tests and generally did not vary by patient- and practice-level subgroups.

[65] In Track 2, we included both claims-based Medicare expenditures and CPCPs in the estimate for total Medicare expenditures without CMS' enhanced payments. Track 2 practices elected to receive a certain percentage of their payments for evaluation and management services from practitioners in their practice in the form of the CPCPs, resulting in a proportionate percentage reduction in their payments for similar Part B FFS claims.

- Bayesian estimates show that there is essentially zero probability that Track 2 of CPC+ achieved savings equivalent to the average CMFs received by practices ($26 PBPM).66
- Total Medicare expenditures including all of CMS' enhanced CPC+ payments and shared savings payments for ACOs of practices that participate in SSP increased by 3 percent more for CPC+ practices.
- Outpatient ED visits fell by 1 percent more for CPC+ practices.
- Ambulatory care visits to primary care practitioners increased by about 2 percent less for CPC+ practices.
- There were small (less than one percentage point) improvements for CPC+ practices in the planned care and population health measures for recommended services among beneficiaries with diabetes and for breast cancer screening.

The remainder of this section presents these findings in detail. As in Section 5.3, we present findings for Medicare expenditures, including results from sensitivity tests and subgroup analyses, and then describe findings for Medicare service use and claims-based quality-of-care measures. (See Appendix 5.F for detailed estimates, including 90% confidence intervals and p-values.)

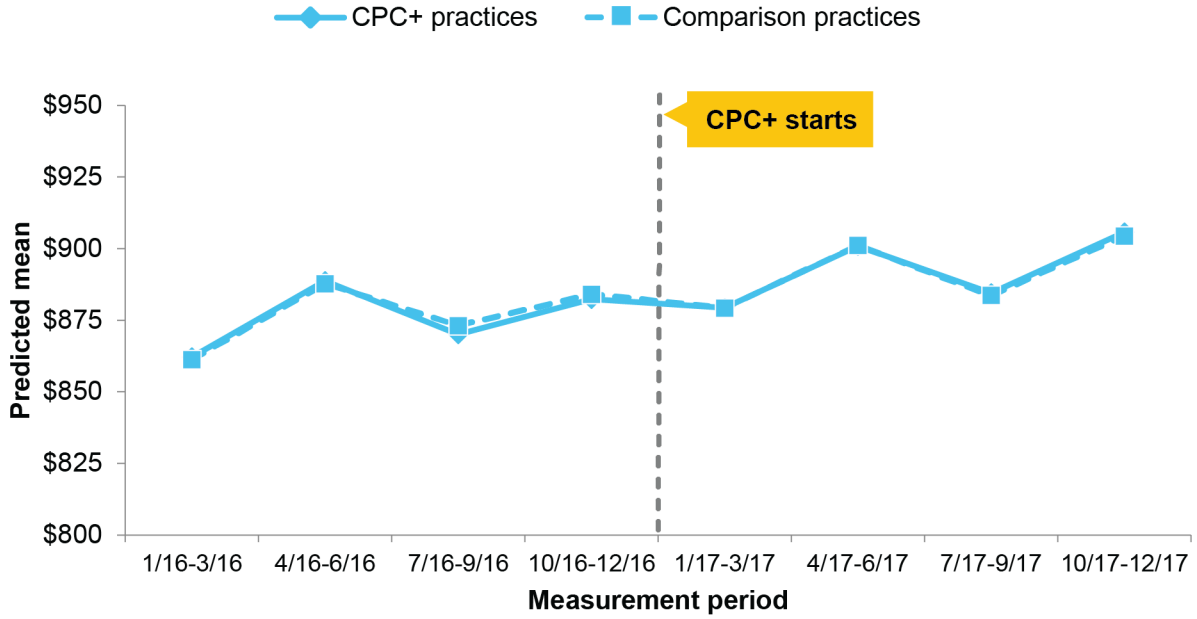
### 5.4.1. Expenditures for Medicare FFS beneficiaries

#### A. Total Medicare expenditures without CMS' enhanced payments

**During Year 1, for practices in Track 2, CPC+ had no discernible effect on total Medicare FFS expenditures including CPCPs but without CMS' enhanced payments.** Relative to expenditures among the comparison practices, total Medicare expenditures without CMS' enhanced payments increased slightly more among the CPC+ practices—by $1.10 PBPM (less than 0.5 percent and not statistically significant [$p = 0.75$]) (Table 5.11). In line with these results, CPC+ and comparison practices had similar quarterly trends in total Medicare expenditures without CMS' enhanced payments (Figure 5.4). Findings were similar when we assessed SSP and non-SSP practices separately. Bayesian analyses found that there was less than a 0.1 percent probability that savings in Medicare expenditures without CMS' enhanced payments were large enough to offset the average CMFs of $26. The probability that CPC+ saved enough in 2017 to offset CMFs and PBIPs paid for Medicare FFS beneficiaries for CPC+, and shared savings payments for the ACOs of CPC+ practices in SSP, was even lower.

[66] CMS paid Track 2 practices an average CPC+ CMF of $28 per month per attributed CPC+ beneficiary in Medicare FFS. This fee was higher than the average fee per month of $26 PBPM received by practices in our analysis sample, because (1) our ITT sample follows Medicare FFS beneficiaries even after they are no longer attributed to a CPC practice and no longer generating CMFs for the practice, and (2) the list of practitioners and the attribution approach we use for the evaluation are slightly different from those used for payment.

**Figure 5.4. Quarterly trends in mean Medicare FFS Part A and Part B expenditures PBPM, excluding CMS' enhanced payments, Track 2 2017 Starters**




Source: Analyses of Medicare claims data from January 2013 through December 2017.

Notes: For CPC+ practices, the figure shows actual, unadjusted average expenditures for the attributed population. For comparison practices, the figure shows actual, unadjusted average expenditures in the baseline quarters and adjusted estimates of average expenditures in the intervention quarters. We obtain this adjusted mean by subtracting the regression-adjusted difference between the CPC+ and comparison means in each quarter (taken from the quarterly difference-in-differences model) from the CPC+ mean in that same quarter. Total Medicare expenditures without CMS' enhanced payments include Comprehensive Primary Care Payments for Track 2 practices.

PBPM = per beneficiary per month.

## B. Total Medicare FFS expenditures by service category

**During Year 1, Medicare expenditures on physician and non-physician services (that is, Part B noninstitutional services) increased less for Track 2 CPC+ practices than for comparison practices.** In Track 2, expenditures on Part B noninstitutional services increased by nearly $3 (1 percent) less among the CPC+ practices than among comparison practices ($p < 0.01$). That is, these expenditures increased between 2016 and 2017 for both groups, but less so among the CPC+ practices. Relative to their comparison counterparts, expenditures for CPC+ practices in SSP declined by $5 PBPM (2 percent) and expenditures for practices not in SSP declined by $1 PBPM (less than 1 percent); the difference was statistically significant only for SSP practices ($p < 0.01$ for SSP practices; and $p = 0.37$ for non-SSP practices). Expenditures on home health services declined more (by $1 PBPM or 1.8 percent) for CPC+ practices than comparison practices in the non-SSP group ($p = 0.09$). Among specific components of Part B noninstitutional services, there was a $2 PBPM (8.5 percent) relative decline in expenditures on ambulatory primary care visits for CPC+ than comparison practices ($p < 0.01$), and no change in expenditures on ambulatory specialist visits.

**There were no noticeable changes in Medicare FFS expenditures for any of the other service categories in Year 1 for Track 2.** Inpatient expenditures, which account for 35 percent of total Medicare expenditures (Figure 5.2 above), changed similarly for CPC+ Track 2 and

comparison practices. The decline in expenditures on Part B noninstitutional services was not large enough ($2 PBPM) to lead to a sizable decline in total Medicare expenditures (even in SSP practices, which experienced a larger decline in Part B noninstitutional services of $5 PBPM [$p < 0.01$]).

## C. Total Medicare expenditures including CMS' enhanced payments (CMFs, PBIPs and SSP payments)

**For Track 2, CPC+ increased net costs.** Within Track 2, after including CMFs, total Medicare expenditures for FFS beneficiaries increased in Year 1 by $27 PBPM (3 percent) more for CPC+ practices than for the comparison practices ($p < 0.01$). Both SSP and non-SSP practices in Track 2 experienced fairly similar increases in total Medicare expenditures including CMFs—$23 PBPM (2.5 percent) among SSP practices and $30 PBPM (3.4 percent) among non-SSP practices ($p < 0.01$ in each case), relative to their respective comparison groups. After including CMFs and PBIPs, as well as shared savings payments made to SSP ACOs, total expenditures increased by $27 PBPM (3 percent) more for CPC+ Track 2 practices than for comparison practices ($p < 0.01$); among non-SSP practices (that are eligible to receive PBIPs), this increase was $32 PBPM (3.7 percent; $p < 0.01$). Among SSP practices (whose ACOs are eligible to receive SSP ACO shared savings), the relative increase was $20 PBPM (2.2 percent; $p < 0.01$).

## Table 5.11. Regression-adjusted means and estimated impacts of CPC+ on selected Medicare expenditures outcomes for attributed Medicare FFS beneficiaries during Year 1: Track 2 2017 Starters

| | Track 2 – Overall | | | | Track 2 – SSP | | | | Track 2 – Non-SSP | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] |
| **Medicare expenditures (PBPM)** | | | | | | | | | | | | |
| **Total Medicare Part A and B expenditures including CPC+ CPCPs** | | | | | | | | | | | | |
| Baseline | $876 | $877 | NA | NA | $896 | $892 | NA | NA | $860 | $864 | NA | NA |
| Year 1 | $877 | $876 | $1.1 | 0.1% | $896 | $895 | -$2.8 | -0.3% | $861 | $861 | $4.1 | 0.5% |
| **Total Medicare Part A and B expenditures including CPC+ CPCPs and CMFs** | | | | | | | | | | | | |
| Baseline | $876 | $877 | NA | NA | $896 | $892 | NA | NA | $860 | $864 | NA | NA |
| Year 1 | $902 | $876 | $27.0*** | 3.0%*** | $922 | $895 | $23.0*** | 2.5%*** | $887 | $861 | $30.0*** | 3.4%*** |
| **Total Medicare Part A and B expenditures including CPC+ CPCPs, CMFs, and PBIPs** | | | | | | | | | | | | |
| Baseline | $876 | $877 | NA | NA | NA | NA | NA | NA | $860 | $864 | NA | NA |
| Year 1 | $904 | $876 | $28.3*** | 3.2%*** | NA | NA | NA | NA | $889 | $861 | $32.3*** | 3.7%*** |
| **Total Medicare Part A and B expenditures including CPC+ CPCPs, CMFs, PBIPs, and shared savings payments to SSP ACOs[b]** | | | | | | | | | | | | |
| Baseline | $878 | $879 | NA | NA | $901 | $898 | NA | NA | NA | NA | NA | NA |
| Year 1 | $905 | $879 | $26.9*** | 3.0%*** | $924 | $901 | $20.2*** | 2.2%*** | NA | NA | NA | NA |
| **Medicare expenditures by service category (PBPM)** | | | | | | | | | | | | |
| **Inpatient expenditures** | | | | | | | | | | | | |
| Baseline | $314 | $316 | NA | NA | $322 | $321 | NA | NA | $308 | $312 | NA | NA |
| Year 1 | $313 | $314 | $1.1 | 0.3% | $321 | $322 | -$2.0 | -0.6% | $306 | $306 | $3.6 | 1.2% |
| **Outpatient expenditures** | | | | | | | | | | | | |
| Baseline | $166 | $170 | NA | NA | $175 | $166 | NA | NA | $160 | $173 | NA | NA |
| Year 1 | $173 | $176 | $0.1 | 0.1% | $182 | $173 | $0.7 | 0.4% | $166 | $180 | -$0.3 | -0.2% |
| **Expenditures on physician and nonphysician Part B noninstitutional services in any setting** | | | | | | | | | | | | |
| Baseline | $245 | $239 | NA | NA | $248 | $250 | NA | NA | $243 | $230 | NA | NA |
| Year 1 | $244 | $240 | -$2.7*** | -1.1%*** | $245 | $252 | -$5.0*** | -2.0%*** | $244 | $232 | -$1.0 | -0.4% |
| **Expenditures on ambulatory visits with primary care physicians** | | | | | | | | | | | | |
| Baseline | $25 | $25 | NA | NA | $24 | $25 | NA | NA | $25 | $25 | NA | NA |
| Year 1 | $23 | $26 | -$2.2*** | -8.5%*** | $23 | $26 | -$2.2*** | -8.5%*** | $23 | $25 | -$2.2*** | -8.5%*** |
| **Expenditures on ambulatory visits with specialists** | | | | | | | | | | | | |
| Baseline | $25 | $24 | NA | NA | $26 | $26 | NA | NA | $24 | $23 | NA | NA |
| Year 1 | $24 | $24 | -$0.1 | -0.3% | $25 | $25 | -$0.1 | -0.4% | $23 | $22 | $0.0 | -0.2% |
| **Skilled nursing home expenditures** | | | | | | | | | | | | |
| Baseline | $65 | $64 | NA | NA | $69 | $69 | NA | NA | $62 | $60 | NA | NA |
| Year 1 | $62 | $61 | -$0.2 | -0.3% | $66 | $65 | $0.7 | 1.1% | $59 | $58 | -$1.0 | -1.6% |

Table 5.11 *(continued)*

| | Track 2 – Overall | | | | Track 2 – SSP | | | | Track 2 – Non-SSP | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] |
| **Home health expenditures** | | | | | | | | | | | | |
| Baseline | $41 | $41 | NA | NA | $41 | $44 | NA | NA | $41 | $40 | NA | NA |
| Year 1 | $39 | $40 | -$0.5 | -1.2% | $39 | $42 | -$0.2 | -0.4% | $39 | $39 | -$0.8* | -1.8%* |
| **Hospice expenditures** | | | | | | | | | | | | |
| Baseline | $24 | $25 | NA | NA | $22 | $23 | NA | NA | $25 | $27 | NA | NA |
| Year 1 | $24 | $25 | $0.5 | 2.3% | $23 | $24 | $0.4 | 1.6% | $26 | $27 | $0.7 | 2.8% |
| **Durable medical equipment expenditures** | | | | | | | | | | | | |
| Baseline | $21 | $21 | NA | NA | $20 | $20 | NA | NA | $21 | $22 | NA | NA |
| Year 1 | $20 | $19 | $0.3 | 1.7% | $19 | $18 | $0.1 | 0.7% | $20 | $20 | $0.5 | 2.5% |
| **Sample sizes** | | | | | | | | | | | | |
| Number of practices | 1,515 | 3,784 | | | 636 | 1,817 | | | 879 | 1,967 | | |
| Number of beneficiaries | 1,263,651 | 2,928,232 | | | 563,755 | 1,469,296 | | | 702,985 | 1,467,369 | | |
| Number of beneficiary-years | 2,157,742 | 4,973,185 | | | 955,938 | 2,493,201 | | | 1,201,804 | 2,479,984 | | |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Notes: Impact estimates are regression-adjusted for pre-CPC+ beneficiary characteristics (including HCC scores) and practice fixed effects. Each impact estimate is based on a difference-in-differences analysis and reflects the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in Year 1 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. Expenditures on Part B noninstitutional services include expenditures on ambulatory primary care visits, ambulatory specialist visits, and non-ambulatory physician visits as well as services provided by other noninstitutional providers (the third category is not shown separately).

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources.

[a] We calculated percentage impacts relative to what the CPC+ mean would have been in Year 1 in the absence of the intervention—that is, the unadjusted CPC+ mean minus the impact estimate.

[b] Impact estimates are not provided for the practices that are not in SSP because those practices are not affected by SSP payments.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

ACO = accountable care organization; C = comparison; CMF = care management fee; CPCP = Comprehensive Primary Care Payment; MDM = master data management; NA = not applicable; PBIP = Performance-based Incentive Payment; PBPM = per beneficiary per month; SSP = Medicare Shared Savings Program.

## D. Results of sensitivity tests for impact estimates on total Medicare FFS expenditures without CMS' enhanced payments, overall for Track 2 practices that began in 2017

**Results from sensitivity tests were largely similar to those from our main model.** The Year 1 impact estimate for total Medicare FFS expenditures without CMS' enhanced payments was similar across different modeling approaches. For example, we obtained similar estimates when we varied the (1) length of the baseline period, (2) composition of the analysis sample, (3) outcome definition, and (4) model specification (Table 5.12). For most of these sensitivity tests, impact estimates remained small (less than 1 percent) and not statistically significant. However, the effect of removing the influence of high-cost beneficiaries was mixed—when we trimmed the costs at the 98th percentile of the distribution, the impact estimate remained close to zero (-$1.0, $p = 0.70$), but when we used log expenditures as our dependent variable, we obtained an unfavorable estimate of a 2.5 percent increase ($p < 0.01$). This finding suggests that the comparison group for Track 2 has more high-cost outliers, which the log formulation reduces in importance. The effect of this formulation would be to lower predicted mean expenditures more for the comparison group than for the treatment group. However, we do not necessarily prefer this specification to our main analysis, because if one effect of CPC+ is to reduce the number of high-cost cases, we would not want to attenuate such effects, which is what the log formulation does.

**Table 5.12. Estimates of the Year 1 impact on Medicare FFS expenditures without CMS' enhanced payments for Track 2 2017 Starters, from main analysis and sensitivity tests**

| Test | Motivation | Impact estimate | Percentage impact | *p*-Value | 90 percent CI lower bound | 90 percent CI upper bound |
|---|---|---|---|---|---|---|
| **Main analysis** | | **$1.1** | **0.1%** | **0.75** | **-$4.6** | **$6.8** |
| Use two-year baseline (instead of one year) | Controls for outcome levels over longer pre-CPC+ period | $3.2 | 0.4% | 0.33 | -$2.1 | $8.5 |
| Use sample of beneficiaries attributed during the intervention, and control for their baseline characteristics and outcomes, instead of using a separate baseline sample | Helps to adjust for changes in sample composition between baseline and follow-up that may differ for the intervention and comparison groups | -$1.8 | -0.2% | 0.63 | -$7.9 | $4.3 |
| Use generalized linear model with log link | Handles skewed expenditure distribution | $1.5 | 0.2% | 0.80 | -$8.3 | $11.3 |
| Trim costs at 98th percentile | Reduces influence of high-cost beneficiaries | -$1.0 | -0.1% | 0.70 | -$5.4 | $3.4 |
| Use log costs[a] | Reduces influence of high-cost beneficiaries | - | 2.5%*** | 0.00 | 1.9% | 3.0% |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

[a] We obtain only a percentage impact, not a dollar impact, from the model specification with log of total expenditures as the outcome.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

CI = confidence interval; FFS = fee-for-service.

## E. Results for subgroups of practices and patients for impact estimates on total Medicare FFS expenditures, without CMS' CPC+ payments

We examined the same practice and beneficiary subgroups as for Track 1 practices.

### Findings from practice subgroup analysis

**The effect on total Medicare FFS expenditures without CMS' enhanced payments did not vary by baseline practice characteristics.** CPC+ did not appear to have different effects on expenditures across subgroups of Track 2 practices, nor were there any sizable or statistically significant effects of CPC+ within practice-level subgroups (Table 5.13).[67]

**Table 5.13. Variation in Year 1 impact on total Medicare FFS expenditures without CMS' enhanced payments, by baseline practice characteristics among Track 2 2017 Starters**

| Practice subgroup definition, based on baseline characteristics | Impact estimate (standard error) | Percentage impact | *p*-Value for difference in impact estimates between subgroups |
|---|---|---|---|
| **Main analysis (all practices)** | **$1.1 ($3.5)** | **0.1%** | **-** |
| **Whether practice participated in prior primary care transformation initiatives (recognized as a medical home or participated in MAPCP or CPC Classic)** | | | |
| Yes | $2.2 ($4.1) | 0.2% | |
| No | -$5.2 ($7.0) | -0.6% | 0.37 |
| **Large[a] and medium, versus small practice based on number of primary care practitioners** | | | |
| Large | -$3.9 ($6.1) | -0.4% | |
| Medium | $1.9 ($8.9) | 0.2% | |
| Small | $6.0 ($10.5) | 0.7% | 0.30 |
| **Whether hospital- or system-owned** | | | |
| Yes | $4.7 ($4.4) | 0.5% | |
| No | -$4.6 ($5.7) | -0.5% | 0.19 |
| **Whether practice attested to meaningful use[a] early (2011–2012)** | | | |
| Yes | -$0.2 ($3.7) | 0.0% | |
| No | $8.4 ($11.3) | 0.9% | 0.47 |
| **Whether the practice is multispecialty versus primary care only** | | | |
| Yes | $6.7 ($7.4) | 0.7% | |
| No | -$1.3 ($4.0) | -0.1% | 0.35 |

[67] From a joint test of significance, we were unable to reject the hypothesis that, considered together, all the subgroup-specific triple interaction terms (subgroup interacted with CPC+ and Year 1 indicators), testing for differential effects of CPC+ by subgroup, were jointly equal to zero ($p = 0.59$).

**Table 5.13.** ***(continued)***

| Practice subgroup definition, based on baseline characteristics | Impact estimate (standard error) | Percentage impact | *p*-Value for difference in impact estimates between subgroups |
|---|---|---|---|
| **Urbanicity of practice's county: rural or suburban location versus urban location** | | | |
| Rural | $9.7 ($12.0) | 1.2% | |
| Suburban | $2.6 ($7.9) | 0.3% | |
| Urban | -$0.3 ($4.1) | 0.0% | 0.74 |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Note: The impact estimates (and standard errors) in the impact estimate column show subgroup-specific impacts, separately for each practice characteristic listed in the table. The *p*-values in the last column represent results from testing for statistically significant differences in impact estimates between the subgroups, based on the same baseline practice characteristic. The *p*-values are from a t-test for subgroups with two categories and from an F-test for subgroups with more than two categories.

[a] Practice is considered to have meaningful use of an EHR if at least one practitioner within the practice attested to meaningful use under the CMS Medicare EHR Incentive Program.

*/**/***Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

CPC = Comprehensive Primary Care; EHR = electronic health record; MAPCP = Multi-payer Advanced Primary Care Practice Demonstration.

## Findings from beneficiary subgroup analysis

**Track 2 impacts on total Medicare FFS expenditures did not differ with beneficiaries' baseline risk level, except for beneficiaries with behavioral health conditions.** There were no statistically significant subgroup-specific impacts or significant differences on our primary outcome measure (total Medicare FFS expenditures without CMS' enhanced payments) between high-risk and non-high-risk beneficiary subgroups according to most definitions of high-risk (see Table 5.14). However, the impact estimate on total Medicare expenditures was unfavorable for CPC+ beneficiaries with behavioral health conditions (schizophrenia, depression and bipolar disorders, and drug/alcohol psychosis or dependence), showing a $24 PBPM increase (2 percent) relative to the comparison group ($p = 0.07$). Because this finding appeared only in Track 2 and not Track 1, it may be driven by Track 2 practices placing greater emphasis on behavioral health integration as well as on screening and management of behavioral health conditions; if Track 2 CPC+ practices increased their referrals and treatment for behavioral health conditions, it might have led to relative increases in inpatient spending and expenditures on skilled nursing facilities for CPC+ beneficiaries. However, given that we are testing for multiple subgroups, one statistically significant finding could occur due to chance alone. Therefore, the evidence for a differential impact for this particular subgroup is weak. Applying any correction for multiple comparisons or multiple hypothesis testing would make it less likely to find statistically significant differences, given that we tested for differential impacts for subgroups defined by five beneficiary characteristics.

## Table 5.14. Variation in Year 1 impact on total Medicare FFS expenditures without CMS' enhanced payments, by baseline beneficiary characteristics among Track 2 2017 Starters

| Beneficiary subgroup definition, based on baseline characteristics | Impact estimate (standard error) | Percentage impact | *p*-Value for difference in impact estimates between subgroups |
|---|---|---|---|
| **Main analysis (all beneficiaries)** | **$1.1 ($3.5)** | **0.1%** | **-** |
| **Patients in the highest quartile of the distribution of HCC score** | | | |
| Yes | $8.2 ($10.1) | 0.4% | |
| No | -$1.2 ($3.0) | -0.2% | 0.37 |
| **Patients who are either in the highest decile of the distribution of HCC score or have dementia** | | | |
| Yes | $6.0 ($14.4) | 0.3% | |
| No | $0.4 ($3.1) | 0.1% | 0.70 |
| **Patients with selected behavioral health conditions (schizophrenia, depression and bipolar disorders, and drug/alcohol psychosis or dependence)** | | | |
| Yes | $23.7 ($13.8)* | 1.8%* | |
| No | -$1.1 ($3.4) | -0.1% | 0.07 |
| **Patients with multiple chronic conditions (at least 2 of 12 frequently occurring chronic conditions[a]), who also had one or more hospitalizations in the prior year** | | | |
| Yes | $24.9 ($23.4) | 1.0% | |
| No | -$1.2 ($3.2) | -0.2% | 0.27 |
| **Patients who are dually eligible for Medicare and Medicaid** | | | |
| Yes | $3.6 ($11.3) | 0.3% | |
| No | $0.3 ($3.6) | 0.0% | 0.78 |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Note: Beneficiary characteristics to determine subgroup membership are measured at the start of the year-long baseline period for baseline observations and the start of Year 1 for Year 1 observations. The estimates (and standard errors) in the impact estimate column show subgroup-specific impacts, separately for each beneficiary characteristic listed in the table. The *p*-value in the last column reflects results from testing for statistically significant differences in impact estimates between the subgroups, based on the same baseline beneficiary characteristic.

[a] The 12 frequently occurring chronic conditions are congestive heart failure, chronic obstructive pulmonary disease, history of acute myocardial infarction, ischemic heart disease, diabetes, severe cancer, history of stroke, depression, dementia, atrial fibrillation, rheumatoid arthritis or osteoarthritis, and chronic kidney disease.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

HCC = hierarchical condition category.

### 5.4.2. Medicare FFS service use

**Track 2 CPC+ practices had a slightly greater reduction in ED visits than comparison practices.** ED visits declined from baseline to Year 1 among both CPC+ and comparison practices, and the difference in reductions was larger and statistically significant for CPC+ practices. We found similar reductions in annualized total ED visits and annualized outpatient ED visits (per 1,000 beneficiaries) of 1.2 percent and 1.6 percent, respectively, or approximately eight visits ($p < 0.01$ in each case) (Table 5.15). These estimated effects of CPC+ were similar in size and statistically significant for SSP and non-SSP practices.

**Track 2 CPC+ practices had lower rates of growth in ambulatory primary care visits than comparison practices.** Annualized ambulatory primary care visits increased less for the CPC+ Track 2 practices than for comparison practices by a statistically significant 87 visits per 1,000 beneficiaries (2 percent; $p < 0.01$). These findings were similar by SSP status. Although the lower growth in ambulatory primary care visits was in line with the changes in expenditures on such visits described above, the effect on the number of visits was smaller—about 2 percent—than the effect on expenditures on ambulatory primary care visits—which was 9 percent. We did not find any evidence that this discrepancy was driven by substituting less expensive ambulatory visits with primary care practitioners in the CPC+ group—for example, more visits with nurse practitioners/physician assistants for visits with physicians. We will explore possible reasons for a greater percentage decline in expenditures than in the number of visits for ambulatory primary care services in greater detail in our implementation analysis, as well as the claims-based impact analysis, in subsequent reports.

CPC+ did not appreciably affect the number of short-stay, acute care hospitalizations or ambulatory visits with specialists—as the differences between CPC+ and the comparison group for each were less than 1 percent and not statistically significant.

## Table 5.15. Regression-adjusted means and estimated impact of CPC+ on selected Medicare service use outcomes for attributed Medicare FFS beneficiaries during Year 1: Track 2 2017 Starters

| | Track 2 – Overall | | | | Track 2 – SSP | | | | Track 2 – Non-SSP | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] | CPC+ mean | C mean | Impact estimate | Percentage impact[a] |
| **Service use (per 1,000 beneficiaries per year)** | | | | | | | | | | | | |
| **Acute hospitalizations (short-stay acute care and CAHs)** | | | | | | | | | | | | |
| Baseline | 287 | 283 | NA | NA | 294 | 286 | NA | NA | 281 | 280 | NA | NA |
| Year 1 | 281 | 278 | -1.4 | -0.5% | 290 | 283 | -1.5 | -0.5% | 274 | 274 | -1.2 | -0.4% |
| **Total ED visits, including observation stays** | | | | | | | | | | | | |
| Baseline | 702 | 696 | NA | NA | 695 | 684 | NA | NA | 707 | 706 | NA | NA |
| Year 1 | 684 | 687 | -8.4*** | -1.2%*** | 678 | 675 | -8.8** | -1.3%** | 689 | 696 | -8.1** | -1.1%** |
| **Outpatient ED visits, including observation stays** | | | | | | | | | | | | |
| Baseline | 491 | 491 | NA | NA | 478 | 473 | NA | NA | 501 | 505 | NA | NA |
| Year 1 | 476 | 484 | -7.7*** | -1.6%*** | 461 | 466 | -9.4*** | -2.0%*** | 488 | 498 | -6.3* | -1.2%* |
| **Ambulatory primary care visits (including FQHCs, RHCs, and CAHs)** | | | | | | | | | | | | |
| Baseline | 4,595 | 4,697 | NA | NA | 4,465 | 4,640 | NA | NA | 4,697 | 4,742 | NA | NA |
| Year 1 | 4,585 | 4,773 | -86.8*** | -1.8%*** | 4,474 | 4,714 | -65.4*** | -1.4%*** | 4,672 | 4,821 | -104.1*** | -2.2%*** |
| **Ambulatory specialty care visits (including FQHCs, RHCs, and CAHs)** | | | | | | | | | | | | |
| Baseline | 4,551 | 4,462 | NA | NA | 4,735 | 4,653 | NA | NA | 4,406 | 4,309 | NA | NA |
| Year 1 | 4,449 | 4,367 | -7.3 | -0.2% | 4,621 | 4,553 | -14.0 | -0.3% | 4,314 | 4,219 | -1.8 | 0.0% |
| **Sample sizes** | | | | | | | | | | | | |
| Number of practices | 1,515 | 3,784 | | | 636 | 1,817 | | | 879 | 1,967 | | |
| Number of beneficiaries | 1,263,651 | 2,928,232 | | | 563,755 | 1,469,296 | | | 702,985 | 1,467,369 | | |
| Number of beneficiary-years | 2,157,742 | 4,973,185 | | | 955,938 | 2,493,201 | | | 1,201,804 | 2,479,984 | | |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Notes: Impact estimates are regression-adjusted for pre-CPC+ beneficiary characteristics and practice fixed effects. Each impact estimate is based on a difference-in-differences analysis and reflects the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in Year 1 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. For Medicare service use measures, measures of outpatient ED visits and total ED visits include observation stays. Ambulatory visits with primary care practitioners and specialists include office-based visits, visits at home, and visits in other settings, such as FQHCs, RHCs, and CAHs.

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources.

[a] We calculated percentage impacts relative to what the CPC+ mean would be in Year 1 in the absence of the intervention—that is, the unadjusted CPC+ mean minus the impact estimate.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

C = comparison; CAH = critical access hospital; ED = emergency department; FQHC = federally qualified health center; NA = not applicable; RHC = rural health center; SSP = Medicare Shared Savings Program.

### 5.4.3. Claims-based quality of care

#### A. Planned care and population health measures

**Similar to findings for Track 1, CPC+ practices in Track 2 had slightly greater improvements in recommended services for beneficiaries with diabetes than comparison practices.** CPC+ practices had greater improvements in all three measures of beneficiaries receiving recommended tests, and in both composite diabetes quality-of-care measures, relative to comparison practices. However, the impact estimates were small in magnitude—less than one percentage point. As such, they do not suggest a significant quality-of-care improvement in terms of the number of eligible beneficiaries being tested (Table 5.16).

Specifically, from baseline to the first year, among patients with diabetes attributed to CPC+ practices relative to their comparison counterparts:

- There was a net increase of 0.4 percentage points in HbA1c testing ($p = 0.06$).
- The likelihood of receiving an eye exam increased by 0.6 percentage points ($p = 0.01$).
- The likelihood of receiving attention for nephropathy increased by 0.5 percentage points ($p = 0.05$).
- The likelihood of receiving all three recommended tests increased by 0.8 percentage points ($p < 0.01$).

Similar to Track 1 findings, all these estimates pointed toward small increases in the number of beneficiaries receiving these services. For example, based on these impact estimates and the 130,786 beneficiaries with diabetes in Year 1 among Track 2 practices that started in 2017, an additional 770 beneficiaries received an eye exam and an additional 1,030 beneficiaries received all three tests. Most of these changes were similar in size for the SSP and non-SSP subgroups (though not always statistically significant). For the second diabetes composite measure for receiving none of the three tests, there was a favorable effect in the non-SSP subgroup only—a decline of 0.2 percentage points, relative to the comparison group ($p = 0.038$).

**For Track 2, CPC+ was also associated with a slight improvement in breast cancer screening among female beneficiaries ages 52 to 74.** There was a slightly greater increase in breast cancer screening among CPC+ Track 2 practices overall (by 0.4 percentage points) and among non-SSP Track 2 CPC+ practices (0.6 percentage points) relative to their comparison counterparts ($p < 0.01$ in each case). This impact estimate suggests an increase of 1,055 female beneficiaries ages 52 to 74 who received breast cancer screening, out of a possible 243,580 beneficiaries.

As we note for Track 1, for both the recommended services among beneficiaries with diabetes and breast cancer screening, these small improvements do not constitute strong evidence of a substantive quality improvement driven by CPC+. We will continue to monitor these estimates in subsequent annual reports to see how results evolve.

## B. Measure for coordination of care

**There were no sizable or statistically significant effects on the claims-based measure for coordination of care.** Specifically, for Track 2, the difference-in differences estimate for unplanned readmission within 30 days of a hospital discharge was essentially zero.

## C. Measures for patient and caregiver engagement

**There were no discernible effects on claims-based measures of patient and caregiver engagement.** Relative to comparison practices, Track 2 practices did not experience changes in the proportion of beneficiaries with any use of hospice services or with any advance care plan visits during Year 1.

Similar to the results for Track 1, mortality rates were similar for Track 2 CPC+ and comparison beneficiaries during baseline and Year 1 (around 3.6 percent), and the difference-in-differences estimate was close to zero.

**Table 5.16. Regression-adjusted means and estimated impact of CPC+ on selected claims-based quality-of-care measures for attributed Medicare FFS beneficiaries during Year 1: Track 2 2017 Starters**

| | Track 2 – Overall | | | Track 2 – SSP | | | Track 2 – Non-SSP | | |
|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | CPC+ mean | C mean | Impact estimate | CPC+ mean | C mean | Impact estimate |
| **Planned care and population health measures for beneficiaries ages 18–75 with diabetes (percentage)** | | | | | | | | | |
| **Received HbA1c test** | | | | | | | | | |
| Baseline | 92.4% | 92.3% | NA | 92.6% | 92.3% | NA | 92.2% | 92.4% | NA |
| Year 1 | 92.4% | 92.0% | 0.4* | 92.7% | 92.2% | 0.1 | 92.2% | 91.8% | 0.5* |
| **Received eye exam** | | | | | | | | | |
| Baseline | 64.0% | 64.1% | NA | 65.0% | 65.8% | NA | 63.2% | 62.8% | NA |
| Year 1 | 63.8% | 63.3% | 0.6** | 64.7% | 64.7% | 0.7** | 63.2% | 62.2% | 0.5 |
| **Received attention for nephropathy** | | | | | | | | | |
| Baseline | 82.9% | 82.6% | NA | 84.5% | 83.3% | NA | 81.6% | 82.0% | NA |
| Year 1 | 83.1% | 82.3% | 0.5* | 84.9% | 83.2% | 0.5 | 81.6% | 81.7% | 0.4 |
| **Diabetes composite measure 1 (received all three tests above: HbA1c test, eye exam, attention for nephropathy)** | | | | | | | | | |
| Baseline | 52.7% | 52.5% | NA | 54.5% | 54.4% | NA | 51.4% | 51.1% | NA |
| Year 1 | 52.8% | 51.8% | 0.8*** | 54.7% | 53.6% | 1.0** | 51.3% | 50.4% | 0.7* |
| **Diabetes composite measure 2 (received none of the three tests above)** | | | | | | | | | |
| Baseline | 2.0% | 1.9% | NA | 1.9% | 2.0% | NA | 2.1% | 1.9% | NA |
| Year 1 | 2.0% | 2.1% | -0.1 | 2.0% | 2.0% | 0.0 | 2.1% | 2.1% | -0.2** |
| **Sample sizes for the diabetes measures** | | | | | | | | | |
| Number of beneficiaries | 166,562 | 378,816 | | 73,486 | 186,315 | | 93,387 | 193,302 | |
| Number of beneficiary-years | 258,626 | 584,336 | | 113,661 | 286,540 | | 144,965 | 297,796 | |
| **Planned care and population health measures for female beneficiaries ages 52–74 (percentage)** | | | | | | | | | |
| **Received breast cancer screening** | | | | | | | | | |
| Baseline | 73.5% | 74.2% | NA | 75.5% | 74.9% | NA | 71.9% | 73.6% | NA |
| Year 1 | 74.5% | 74.7% | 0.4*** | 76.5% | 75.6% | 0.2 | 73.0% | 74.0% | 0.6*** |
| **Sample sizes for the breast cancer screening measure** | | | | | | | | | |
| Number of beneficiaries | 297,867 | 688,236 | | 132,295 | 343,379 | | 166,230 | 346,745 | |
| Number of beneficiary-years | 479,205 | 1,101,177 | | 211,243 | 548,633 | | 267,962 | 552,544 | |
| **Measures for coordination of care (percentage)** | | | | | | | | | |
| **30-day all-cause unplanned readmissions** | | | | | | | | | |
| Baseline | 15.5% | 15.7% | NA | 15.6% | 15.8% | NA | 15.3% | 15.6% | NA |
| Year 1 | 15.3% | 15.6% | -0.1 | 15.7% | 15.9% | -0.1 | 15.0% | 15.4% | -0.1 |

Table 5.16 *(continued)*

| | Track 2 – Overall | | | Track 2 – SSP | | | Track 2 – Non-SSP | | |
|---|---|---|---|---|---|---|---|---|---|
| | CPC+ mean | C mean | Impact estimate | CPC+ mean | C mean | Impact estimate | CPC+ mean | C mean | Impact estimate |
| **Measures for patient and caregiver engagement (percentage)** | | | | | | | | | |
| **Received hospice services** | | | | | | | | | |
| Baseline | 2.8% | 2.7% | NA | 2.7% | 2.6% | NA | 2.8% | 2.8% | NA |
| Year 1 | 2.8% | 2.7% | 0.0 | 2.7% | 2.6% | 0.0 | 2.9% | 2.8% | 0.1 |
| **Had an advance care plan visit** | | | | | | | | | |
| Baseline | 2.6% | 2.0% | NA | 2.9% | 2.1% | NA | 2.4% | 1.9% | NA |
| Year 1 | 3.7% | 3.1% | -0.1 | 4.2% | 3.5% | 0.0 | 3.4% | 2.9% | -0.1 |
| **Sample sizes for unplanned readmission, receiving hospice services, and having an advance care plan visit** | | | | | | | | | |
| Number of index discharges for readmissions | 524,684 | 1,180,152 | | 238,984 | 596,160 | | 285,700 | 583,992 | |
| Number of beneficiaries | 1,263,651 | 2,928,232 | | 563,755 | 1,469,296 | | 702,985 | 1,467,369 | |
| Number of beneficiary-years | 2,157,742 | 4,973,185 | | 955,938 | 2,493,201 | | 1,201,804 | 2,479,984 | |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Notes: Impact estimates are regression-adjusted for baseline beneficiary characteristics (including HCC scores) and practice fixed effects. Each impact estimate is based on a difference-in-differences analysis and reflects the difference in the regression-adjusted average outcome for attributed Medicare FFS beneficiaries in CPC+ practices in the intervention year compared with the average outcome in the baseline year, relative to the same difference over time for attributed Medicare FFS beneficiaries in comparison practices. For the readmissions outcome, which is estimated at the discharge level, we also controlled for discharge-level risk factors. For the binary quality-of-care outcomes, we present the absolute impact estimate only in percentage points. We do so because percentage impacts for some of the outcomes are likely to be misleadingly large, given the low means for the outcome measures.

Although this table indicates which estimates are statistically significant, when we interpret evidence, we combine evidence from the magnitude of the effect, the *p*-values, findings on related outcomes, subgroups, sensitivity tests, and other data sources.

We grouped the claims-based quality-of-care measures into four domains according to the CPC+ function where they are covered in the 2018 Implementation Guide (CMMI 2018).

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

C = comparison; FFS = fee-for-service HCC = hierarchical condition category; NA = not applicable; SSP = Medicare Shared Savings Program.

### 5.4.4. Aggregate impacts on key outcomes

As for Track 1, we present aggregate impacts in Year 1 across all Medicare FFS beneficiaries assigned to Track 2 practices that began in 2017, for four outcome measures: (1) total Medicare expenditures without CMS' enhanced payments, (2) number of hospitalizations, (3) number of outpatient ED visits, and (4) 30-day unplanned readmissions. The only statistically significant aggregate estimate was a relative reduction of 7,701 outpatient ED visits (Table 5.17).

**Table 5.17. Aggregate impacts on key outcomes: Track 2 2017 Starters**

| Outcome | Estimate | 90 percent CI lower bound | 90 percent CI upper bound |
|---|---|---|---|
| Total Medicare expenditures including Comprehensive Primary Care Payments but excluding CMS' enhanced payments | $18,312,463 | -$49,860,417 | $86,485,343 |
| Hospitalizations | -1,370 | -3,988 | 1,247 |
| Outpatient ED visits | ***-7,701*** | -11,575 | -3,826 |
| 30-day readmissions | -272 | -969 | 426 |

Source: Mathematica's analysis of Medicare claims data from January 2013 through December 2017.

Note: This table calculates the estimated effects over all attributed Medicare FFS beneficiaries who were in the intent-to-treat analysis sample for Year 1 of CPC+. The total number of beneficiaries attributed to Track 2 practices in the annual analysis sample was 1,089,635 in Year 1. The number of eligible beneficiary months for the same number of beneficiaries in Track 2 practices was 12,071,196, and the number of eligible index discharges (for readmissions) was 267,323. Impact estimates are from difference-in-differences regressions using practice fixed effects and patient-level control variables from the pre-CPC+ period. See Section 5.2 for a full list of measures and definitions, as well as a discussion of methods. **Yellow shading** with ***bold, italicized text*** signifies that estimate was statistically significant at the $p < 0.10$ level.

CI = confidence interval; ED = emergency department.

## 5.5. Discussion

For the practices that began CPC+ in 2017, the evaluation found no evidence that CPC+ affected total Medicare FFS expenditures without CMS' enhanced payments in its first year. However, CPC+ was associated with slightly increased expenditures once CMS' enhanced payments (that is, CMFs and PBIPs, and SSP payments for ACOs of practices that participate in SSP) were included. For each track, the estimated increase in net Medicare expenditures was similar in size to the average CMFs of $14 and $26 PBPM that Track 1 and Track 2 practices, respectively, received for Medicare FFS beneficiaries.[68] Results showed small, favorable impacts on outpatient ED visits and quality-of-care measures for recommended services among beneficiaries with diabetes and for breast cancer screening, and reduced growth in ambulatory

[68] CMS paid practices in Tracks 1 and 2 average CPC+ CMFs of $15 and $28, respectively, per month per CPC+ beneficiary in Medicare FFS. These fees were higher than the average fees per month of $14 and $26 PBPM in our analysis sample for Medicare FFS beneficiaries in Tracks 1 and 2, respectively, because (1) our ITT sample follows beneficiaries even after they are no longer attributed to a CPC+ practice and therefore the practice is no longer receiving CMFs for the Medicare FFS beneficiary, and (2) the list of practitioners and the attribution approach we use for the evaluation is slightly different from those used for payment. This finding applies to PBIPs and, for Track 2, CPCPs as well. Therefore, all our calculated PBPM payment amounts (for CMFs and PBIPs in both tracks, and CPCPs in Track 2) are lower than the CMS-reported numbers.

primary care visits. These findings were consistent across Tracks 1 and 2 of CPC+ and—with only occasional deviations—across subgroups of beneficiaries and practices, including practice participation in SSP.

The impact estimates for Medicare FFS beneficiaries presented in this report are preliminary for two reasons. First, they cover only the first year of the intervention. Second, they apply only to the 2,888 practices that started CPC+ on January 1, 2017 (although we expect the experiences of these practices will mostly drive the final impact estimates, given that only 163 new practices joined in 2018). Although these are early findings, they are robust to a variety of sensitivity tests.

The fact that CPC+ did not appreciably reduce Medicare FFS expenditures does not fundamentally provide information to draw conclusions about the success of CPC+. CMS plans for practices to participate in CPC+ for five years and, if CPC+ were to operate as intended, we would not expect reductions in Year 1 Medicare FFS expenditures. Specifically, the conceptual framework underlying CPC+ hypothesizes that (1) practices will transform how they deliver care to meet the track-specific CPC+ care delivery requirements and more broadly the CPC+ functions; (2) these changes will lead (among other things) to better care planning to manage chronic conditions, more efficient use of health care resources (for example, more use of primary care instead of EDs for non-urgent issues), and more engaged patients who better manage their own health; and (3) in turn, these improvements in health and efficiency will result in lower total Medicare expenditures. Any of these three steps could reasonably take a year or more to accomplish. Studies of previous primary care transformation programs have also found that programs need time to mature, before effects materialize (Sinaiko et al. 2017; OIG 2017; Flieger 2017; Rosenthal et al. 2016; Alexander et al. 2015; Burton et al. 2018; Nichols et al. 2018).

In many respects, in fact, the unremarkable impact estimates for Medicare expenditures on FFS beneficiaries in Year 1 lend credibility to the impact evaluation design as a whole. The design is nonexperimental and, despite a well-matched comparison group and many planned sensitivity tests, the potential for bias remains. That is, it is always possible that some systematic difference could arise between the CPC+ and comparison groups during the intervention period that was not caused by CPC+—for example, due to differences in care delivery or population health trends that we could not measure and account for when selecting a comparison group. The fact that impact estimates for Year 1 are plausible, both in sign and in magnitude, bolsters our confidence in the evaluation design generally and in the comparison group in particular. If there were a major imbalance on some unobserved practice characteristic that greatly influences outcomes, it could cause large and implausible impact estimates—which we did not find.

The favorable impact estimates in Year 1 for outpatient ED visits and selected quality-of-care measures are noteworthy, although the estimated effect sizes are very small and are unlikely to reflect a major shift in clinical care for most beneficiaries. These findings, too, are not conclusive. We have conducted many statistical tests for this report and, if CPC+ truly had no effects, we would expect to find some statistically significant results (either favorable or

unfavorable) purely due to chance, given the number of hypotheses tested.[69] Also, even if the estimated differences are due to CPC+, they are small and do not yield discernable reductions in total Medicare expenditures. We will have greater confidence in these results if we continue to observe favorable impacts on these outcomes in the later years of CPC+.

Nevertheless, the select small, early favorable findings are consistent with past studies of primary care transformation initiatives. This consistency is especially true for the diabetes and breast cancer measures, as past studies also found favorable effects on planned care and population health outcomes (Sinaiko et al. 2017; Friedberg et al. 2014; Rosenthal et al. 2016; Timbie et al. 2017; Shi et al. 2017a, 2017b; Ashburner et al. 2017). Notably, however, these early quality-of-care findings from CPC+ differ from those from CPC Classic, which did not lead to any appreciable improvement in a limited set of claims-based quality measures (Peikes et al. 2018a, 2018c). Previous findings about ED visits have been more mixed. Specifically, although some previous studies of primary care transformation initiatives, including the evaluation of CPC Classic, found a shift away from care delivered in high-cost or acute-care settings (Peikes et al. 2018a, 2018c; Schurrer et al. 2017; Shi et al. 2017b; OIG 2017; Cuellar et al. 2016; Orzol et al. 2018; Green et al. 2018; Rosenthal et al. 2016), other studies have found the opposite, linking transformation initiatives to higher rates of ambulatory care-sensitive hospitalizations, ED visits, or specialist visits (Timbie et al. 2017; Yoon et al. 2018; Friedberg et al. 2014).

We expect more conclusive evidence will emerge in future years of the evaluation as (1) the evidence base grows (with a longer test period and additional data sources, including Medicaid, and, to a lesser extent, with observations for the 163 practices that joined CPC+ in 2018), and (2) the practices have time to deepen the care delivery changes under CPC+ and these changes have time to influence beneficiaries' health and outcomes examined here. In previous studies of practice transformation initiatives, results about effects on expenditures have been mixed. Some studies found savings (for example, Cuellar et al. 2016; Shi et al. 2017b; Song et al. 2014; OIG 2017; McWilliams et al. 2016, 2018), whereas others, including the evaluation of CPC Classic, did not (Peikes et al. 2018a, 2018c; Friedberg et al. 2014; Yoon et al. 2016; Orzol et al. 2018; Zulman et al. 2017; Nichols et al. 2018; Sinaiko et al. 2017).

However, the package of payment and care delivery changes that CPC+ is testing is distinctive, and the final evaluation results could well differ from those of earlier initiatives. CPC+ may have more favorable effects. CPC+ is far-reaching, with more than 3,000 participating practices in 18 regions across the United States. It is also focused, with concrete care delivery requirements and multipayer supports to guide and incentivize practices in their care delivery transformation. In addition, CPC+ operates in a different care delivery environment than previous initiatives, including CPC Classic. This factor could either enhance or dampen effects. It could enhance effects if changes for the CPC+ practices interact favorably with the

[69] Furthermore, the substantial variation across CPC+ practices in the number of attributed beneficiaries could have led the *p*-values reported here to be too small, meaning that these effects may not be statistically significant. For example, Cameron, Gelbach, and Miller (2008) reported a null-hypothesis rejection rate of 18 percent, rather than the 5 percent that would be expected by chance, when they ran similar models on a data set that contained groups of varying sizes. We are testing alternative models for future reports, but our primary conclusion—that CPC+ had little effect in the first year—would not change.

CPC+ model. It could dampen estimated effects if the practices in our comparison group are also transforming their primary care in line with the tenets of the patient-centered medical home. To assess this possibility, our evaluation is monitoring participation of CPC+ and comparison practices in other quality improvement initiatives.

Our analysis found some differences between CPC+ and comparison practices in their participation in other initiatives during baseline and Year 1 (see Appendix G for details). For example, at a point in time in Year 1 for both tracks, we found that comparison practices were substantially more likely than CPC+ practices to be participating in federal and state-sponsored primary care initiatives but substantially less likely than CPC+ practices to have participated in insurer-sponsored initiatives linking payment to performance. Changes in participation *over time* were also different by intervention status, with comparison practices more likely to increase their participation in other CMS initiatives between the baseline year and Year 1—for example, with greater increases than the CPC+ practices in billing for care management services and in participation in SSP and the Next Generation ACO Model.

The fact that the CPC+ and comparison practices participate in other models is part of the real-world nature of the evaluation that we will consider when interpreting the estimates, rather than a shortcoming of the study. Differences in participation in non-CPC+ initiatives could decrease the estimated impacts of the CPC+ incentives and supports in improving primary care, if those other initiatives are encouraging comparison group practices to make changes similar to those occurring in the CPC+ group. They could also increase the estimated effects of CPC+ if the models that the CPC+ practices participate in complement or reinforce the CPC+ model. Participation in other initiatives does not fundamentally bias the impact estimates or render them less meaningful. It simply changes the interpretation to the real-world context, where the research sample also participates in new models, and impact estimates consider the effect of CPC+ against the backdrop of an evolving health care payment and delivery landscape. By observing participation in non-CPC+ initiatives among the CPC+ and comparison practices, we gain information about the participation changes that CPC+ practices likely *would* have made themselves, in the absence of CPC+. Thus, comparing outcomes of CPC+ practices to those of comparison practices gives an unbiased estimate of the impact of the CPC+ incentives, requirements, and supports, relative to what the practices would have done without them.

In future reports, we will expand the impact analysis in several ways. Apart from continuing to estimate the annual effects of CPC+, by track, on the key Medicare FFS outcomes included in this report, we will estimate cumulative impacts in each track throughout the model test period. We will also include additional claims-based outcomes of Medicare service use and quality of care—for example, measures of comprehensiveness of care and potentially avoidable service use, such as potentially avoidable ED visits—and measures for use of appropriate medications, based on Medicare Part D drug claims. We plan to supplement the Medicare analyses with analyses of other data sources, too. For example, we will assess CPC+ practices' performance on the eCQMs the practices reported to CMS. Finally, to examine the impact of CPC+ on beneficiaries covered by other public payers, we will conduct an impact analysis of Medicaid expenditures and service use in regions where we can select a valid comparison group, using Medicaid beneficiaries attributed to CPC+ and comparison practices.

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