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REPORT

Evaluation of the Comprehensive Primary Care Initiative: Appendix to the Third Annual Report

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CONTENTS

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APPENDIX TABLES

APPENDIX A:

PRACTICE SURVEY RESULTS

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This appendix presents findings from the first three rounds of the CPC practice survey. The first round was administered to only CPC practices and was fielded October through December 2012; the second and third rounds were administered to CPC practices and a set of matched comparison practices, and were fielded April through July 2014 (18 to 21 months after CPC began) and April through August 2015 (30 to 34 months after CPC began).

- Table A.1 lists the questions, grouped by domain, included in the modified PCMH-A (M-PCMH-A) module of the practice surveys.
- Tables A.2–A.7 present the 2012, 2014, and 2015 practice survey results.
- Tables A.2a and A.2b present mean CPC and comparison practice responses to the M-PCMH-A questions in 2012 (CPC only), 2014, and 2015, overall and by region.
- Table A.3 presents average changes in CPC practices' overall M-PCMH-A score over time by key practice characteristics.
- Tables A.4a and A.4b present distributions of CPC and comparison practice responses to the M-PCMH-A questions in 2012 (CPC only), 2014, and 2015, overall and by region.
- Table A.5 presents CPC and comparison practice infrastructure in 2014 and 2015, overall and by region.
- Table A.6 presents CPC practices' assessment of learning activities and assistance provided by regional learning faculty in 2014 and 2015, overall and by region.
- Table A.7 presents CPC practices' experience and satisfaction with CPC in 2014 and 2015, overall and by region.

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Table A.1. Items and domains in the CPC practice survey's modified PCMH-A module

Question	
Continuity of care	
A2_1	Patient assignment to provider panels
1-3	Not assigned to panels
4-6	Assigned to panels; panel assignments are not routinely used by practice
7-9	Assigned to panels; panel assignments are routinely used for scheduling
10-12	Assigned to panels; panel assignments are routinely used for scheduling and monitored to balance supply and demand
A2_2	Patients are encouraged to see paneled provider and practice team
1-3	Only at the patient's request
4-6	By the practice team, but it is not a priority in appointment scheduling
7-9	By the practice team, and it is a priority in scheduling appointments; patients commonly see other providers
10-12	By the practice team, and it is a priority in scheduling appointments; patients usually see their own provider/practice team
Access to care	
A2_3	Appointment systems
1-3	Limited to a single office-visit type
4-6	Provide some flexibility in scheduling different visit lengths
7-9	Provide flexibility and include capacity for same-day visits
10-12	Flexible and can accommodate customized visit lengths, same-day visits, scheduled follow-up, and multiple provider visits
A2_4[a]	Communicating with the practice team through email, text messaging, or patient portal
1-3	Not regularly available to practice patients
4-6	Available on a limited basis for practice patients
7-9	Generally available at a patient's request
10-12	Generally available; patients are regularly asked about their communication preferences
A2_6	Patient after-hours access (24 hours, 7 days a week) to a physician, PA/NP, or nurse
1-3	Not available or limited to an answering machine
4-6	Available from a coverage arrangement that does not offer a standardized communication protocol back to the practice for urgent problems
7-9	Provided by a coverage arrangement that shares necessary patient data and provides a summary to the practice
10-12	Available via email or phone directly with the practice team or a provider who has real-time access to the patient's electronic medical record
Planned care for chronic conditions and preventive care	
A2_7	Registries on individual patients
1-3	Not available to practice teams for pre-visit planning or patient outreach
4-6	Available to practice teams; not routinely used for pre-visit planning or patient outreach
7-9	Available to practice teams; routinely used for pre-visit planning or patient outreach but only for a limited number of diseases and risk states
10-12	Available and routinely used across a comprehensive set of diseases and risk states
A2_8	Comprehensive, evidence-based guidelines on prevention or chronic illness treatment
1-3	Not readily available
4-6	Available to the team but do not influence care
7-9	Available and integrated into care protocols and/or reminders
10-12	Guide the creation of individual-level patient reports to use during visits

Table A.1. (*continued*)

Question	
A2_9	Visits
1-3	Largely focus on patient's acute problems
4-6	Organized around acute problems with attention to ongoing illness and prevention needs if time permits
7-9	Organized around acute problems with attention to ongoing illness and prevention needs if time permits; practice uses subpopulation reports to proactively call groups of patients for planned care visits
10-12	Organized to address both acute and planned care needs; use tailored guideline-based information in team huddles to ensure patient needs are met at each encounter
A2_10[a]	Reminders to providers
1-3	Not available
4-6	Include general notification of the existence of chronic illness; do not describe needed services at time of encounter
7-9	Include general notification of the existence of chronic illness and needed services through periodic reporting
10-12	Include general notification of the existence of chronic illness and specific information about guideline adherence at the time of individual patient encounters
A2_11	Nonphysician practice team members
1-3	Play a limited role in providing clinical care
4-6	Primarily tasked with managing patient flow and triage
7-9	Provide some clinical services such as assessment or self-management support
10-12	Perform key clinical service roles matching abilities and credentials
A2_12	Medication reconciliation
1-3	Not done
4-6	Done intermittently, as needed
7-9	Done regularly for patients during care transitions; documented in the patient's medical record
10-12	Done regularly for all patients; documented in the patient's medical record
Risk-stratified care management	
A2_16	Standard method or tools to stratify patients by risk level
1-3	Not available
4-6	Available; not consistently used to stratify all patients
7-9	Available; consistently used to stratify all patients but inconsistently integrated into all aspects of care delivery
10-12	Available; consistently used and integrated into all aspects of care delivery
A2_17	Clinical care management services for high-risk patients
1-3	Not available
4-6	Provided by external care managers with limited connection to the practice
7-9	Provided by external care managers who regularly communicate with the care team
10-12	Systematically provided by care managers who are practice team members
A2_18	Registry or panel-level data
1-3	Not available to assess or manage care for practice populations
4-6	Available to assess and manage care for practice populations on an ad hoc basis
7-9	Regularly available to assess and manage care for practice populations for a limited number of diseases and risk states
10-12	Regularly available to assess and manage care for practice populations across a comprehensive set of diseases and risk states

Table A.1. (*continued*)

Question	
Patient and caregiver engagement	
A2_19	Assessing patient and family values and preferences
1-3	Not done
4-6	Done but not used in planning and organizing care
7-9	Done and incorporated in planning and organizing care on an ad hoc basis
10-12	Done systematically and incorporated in planning and organizing care
A2_20	Involving patients in decision making and care
1-3	Not a priority
4-6	Accomplished by provision of patient education materials or referrals to classes
7-9	Supported and documented by practice teams
10-12	Systematically supported by practice teams trained in decision making techniques
A2_21[a]	Patient comprehension of verbal and written materials
1-3	Not assessed
4-6	Assessed; accomplished by assuring materials are at a level and language patients understand
7-9	Assessed; accomplished by translation services or multilingual staff assuring materials and communications are at a level and language patients understand
10-12	Assessed; accomplished by translation services or multilingual staff, and training staff in health literacy and communication techniques assuring that patients know how to manage conditions at home
A2_22	Self-management support
1-3	Limited to the distribution of information (for example, pamphlets, booklets)
4-6	Accomplished by referral to self-management classes or educators
7-9	Provided by goal setting and action planning with members of the practice team
10-12	Provided by practice team members trained in patient empowerment and problem-solving methodologies
A2_23	Test results and care plans
1-3	Not communicated to patients
4-6	Communicated to patients based on an ad hoc approach
7-9	Systematically communicated to patients in a way that is convenient to the practice
10-12	Systematically communicated to patients in ways that are convenient to patients
A2_24	Feedback to practice from patient and family caregiver council
1-3	Not collected
4-6	Collected on an ad hoc basis but not regularly incorporated into practice improvements
7-9	Collected regularly (at least quarterly) and incorporated into practice improvements on an ad hoc basis
10-12	Consistently used to guide practice improvements and measure system performance and practice-level care interactions
Coordination of care across the medical neighborhood	
A2_14	Tracking of patient referrals to specialists
1-3	Not generally done
4-6	Sometimes done
7-9	Consistently done for high-risk patients
10-12	Consistently done for all patients

Table A.1. (*continued*)

Question	
A2_15	Care plans
1-3	Not routinely developed or recorded
4-6	Developed and recorded but reflect only providers' priorities
7-9	Developed collaboratively with patients and families; include self-management and clinical goals; not routinely recorded or used to guide subsequent care
10-12	Developed collaboratively with patients and families; include self-management and clinical goals; routinely recorded and used to guide subsequent care
A2_26[a]	Referral relationships with medical and surgical specialists
1-3	Not formalized with referral protocols or practice agreements
4-6	Formalized with referral protocols or practice agreements with a few medical and surgical specialist groups
7-9	Formalized with referral protocols or practice agreements with many medical and surgical specialist groups
10-12	Formalized with referral protocols or practice agreements with most or all medical and surgical specialist groups
A2_27	Behavioral health services
1-3	Difficult to obtain reliably
4-6	Available from behavioral health specialists but neither timely nor convenient
7-9	Available from behavioral health specialists and generally timely and convenient
10-12	Readily available from behavioral health specialists who are on-site members of the care team or work in an organization with which the practice has a referral protocol or agreement
A2_28	Patients in need of specialty care, hospital care, or supportive community-based resources
1-3	Cannot reliably obtain needed referrals to partners with whom the practice has a relationship
4-6	Obtain needed referrals to partners with whom the practice has a relationship
7-9	Obtain needed referrals to partners with whom the practice has a relationship; relevant information is communicated in advance
10-12	Obtain needed referrals to partners with whom the practice has a relationship; relevant information is communicated in advance; timely follow-up after visit
A2_29	Practice follow-up with patients seen in emergency room (ER) or hospital
1-3	Generally does not occur, because information is not available to the primary care team
4-6	Occurs only if the ER or hospital alerts the practice
7-9	Occurs because the practice makes proactive efforts to identify patients
10-12	Done routinely, because the practice has arrangements with ER and hospital to track patients and ensure follow-up is completed within a few days
A2_30	Linking patients to supportive community-based resources
1-3	Not done systematically
4-6	Limited to providing patients a list of identified community resources in an accessible format
7-9	Accomplished through a designated staff person or resource responsible for connecting patients with community resources
10-12	Accomplished through active coordination between health system, community service agencies, and patients; accomplished by a designated staff person
A2_31	Transmission of patient information when patients are referred to other providers
1-3	Not done consistently
4-6	Done sometimes but does not always contain a complete set of clinical information
7-9	Done usually but does not always contain a complete set of clinical information
10-12	Done consistently and always contains a complete set of clinical information

Table A.1. (*continued*)

Question	
A2_32	Receipt of information about patients from hospitals and ERs in the community
1-3	Does not occur consistently
4-6	Occurs usually but often one week or longer after the event
7-9	Occurs usually occurs within 72 hours after the event
10-12	Consistently occurs within 24 hours after the event
A2-34	Practice knows the total cost to payers of medical care
1-3	For no patients
4-6	For some patients
7-9	For most patients
10-12	For all patients
Continuous improvement driven by data	
A2_35	Quality improvement (QI) activities
1-3	Not organized or supported consistently
4-6	Conducted on an ad hoc basis in reaction to specific problems
7-9	Based on a proven improvement strategy in reaction to specific problems
10-12	Based on a proven improvement strategy; used continuously in meeting organizational goals
A2_36	QI activities
1-3	Conducted by a centralized committee or department
4-6	Conducted by topic-specific QI committees
7-9	Conducted by all practice teams supported by a QI infrastructure
10-12	Conducted by practice teams supported by a QI infrastructure with meaningful involvement of patients and families
A2_37	Performance measures
1-3	Not available for the practice
4-6	Available for the practice but limited in scope
7-9	Comprehensive and available for the practice but not for individual providers
10-12	Comprehensive and available for the practice and individual providers and fed back to individual providers
A2_38	Reports of patient care experiences and care processes or outcomes
1-3	Not routinely available to practice teams
4-6	Routinely provided as feedback to practice teams but not reported externally
7-9	Routinely provided as feedback to practice teams and reported externally with team identities masked
10-12	Routinely provided as feedback to practice teams; transparently reported externally to patients, other teams, and external agencies
A2_39[a]	Staff, resources, and time for QI activities
1-3	Not readily available in the practice
4-6	Occasionally available but limited in scope
7-9	Generally available and usually at the level needed
10-12	Fully available in the practice
A2_40	Practice hiring and training processes
1-3	Focus only on narrowly defined functions and requirements of each position
4-6	Reflect how potential hires will affect the culture and participate in QI activities
7-9	Place a priority on the ability of new and existing staff to improve care and create a patient-centered culture

Table A.1. (*continued*)

Question	
10-12	Support and sustain improvements in care through training and incentives focused on rewarding patient-centered care
A2_41	Responsibility for conducting QI activities
1-3	Not assigned to any specific group
4-6	Assigned to a group without committed resources
7-9	Assigned to an identified QI group that receives dedicated resources
10-12	Shared by all staff
Questions not included in the M-PCMH-A domains[b]	
A2_5	Scheduled phone or group visits with the physician, PA, NP, or nurse
1-3	Not regularly available to practice patients
4-6	Available on a limited basis
7-9	Generally available at a patient's request
10-12	Generally available; patients are regularly asked about their preferences for phone or group visits
A2_13	Notification of patients of their laboratory and radiology results
1-3	Generally not done
4-6	Sometimes done
7-9	Consistently done for abnormal results and sporadically for normal results
10-12	Consistently done for abnormal and normal results
A2_25	Shared decision making aids used to help patients and providers jointly decide on treatment options
1-3	Not provided to patients
4-6	Sometimes provided to patients for one or more clinical conditions
7-9	Consistently provided to patients for two or more clinical conditions, but provision is not formally tracked
10-12	Consistently provided to patients for two or more clinical conditions; provision is tracked with run charts or other measures
A2_33	Timely receipt of information about patients after they visit specialists in the community
1-3	Does not occur consistently
4-6	Occurs for some patients
7-9	Occurs for most patients
10-12	Occurs for all patients

Sources: 2012, 2014, and 2015 CPC practice surveys administered October through December 2012, April through July 2014, and April through August 2015, respectively.

Notes: Question numbers and labels are from the 2015 practice survey.

[a] The wording of the question and/or response categories changed between the 2012 and 2014 versions of the survey. There were no wording changes from the 2014 to 2015 version.

[b] Four questions are not included in the composite scores for the seven M-PCMH-A domains, because three questions were not asked in the first survey round (A2_5, A2_25, A2_33), and one question (A2_13) was determined to be not statistically related to any function of primary care delivery in our factor analysis.

M-PCMH-A = Patient-Centered Medical Home Assessment modified for the CPC evaluation; PA = physician assistant; NP = nurse practitioner; ER = emergency room; QI = quality improvement.

Table A.2a. Mean CPC and comparison practice responses to M-PCMH-A questions in 2012, 2014, and 2015, overall and by region (AR, CO, NJ)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
	Sample size[a]	484	484	484	421	340	66	66	66	82	64	72	72	72	75	58	68	68	68	46	42
M-PCMH-A scales (scale: 1 [least advanced approach]–12 [best approach])																					
A2_1-2	Continuity of care	9.6	10.2	10.4	9.5	9.5	10.3	10.6	10.6	9.3	9.9	9.0	10.0	10.2	9.1	8.7	9.5	10.0	10.4	9.5	9.4
A2_3, 4, 6	Access to care	7.0	9.6	10.1	8.7	9.6	6.6	9.5	9.9	7.2	9.0	7.1	9.1	10.2	8.9	9.3	7.1	9.4	10.4	8.4	9.8
A2_7-12	Planned care for chronic conditions and preventive care	7.6	9.1	9.5	8.8	9.1	7.8	9.0	9.2	8.1	8.4	7.9	9.1	9.3	8.3	8.6	7.5	9.3	9.8	8.7	8.9
A2_16-18	Risk-stratified care management	4.6	9.7	10.0	7.1	7.9	4.4	9.9	9.7	6.0	7.2	4.8	9.6	9.9	6.3	7.1	4.6	9.5	9.9	7.1	7.6
A2_19-24	Patient and caregiver engagement	6.6	7.9	8.5	7.9	8.2	6.8	7.5	8.1	7.5	7.6	6.4	8.2	8.4	7.6	7.8	6.4	7.7	8.4	8.2	8.0
A2_14-15, 26-32, 34	Coordination of care cross the medical neighborhood	6.7	8.0	8.5	7.9	8.3	6.8	7.9	8.3	7.5	8.0	6.7	8.4	8.8	7.2	7.7	6.5	7.8	8.3	7.7	8.0
A2_35-41	Continuous improvement driven by data	5.7	8.0	8.3	7.1	7.7	5.5	7.9	7.9	5.9	8.0	6.2	8.1	8.6	6.9	7.0	4.8	7.8	8.1	7.3	7.3
	Overall M-PCMH-A score	6.5	8.7	9.1	8.0	8.5	6.5	8.6	8.9	7.1	8.0	6.6	8.8	9.2	7.6	7.9	6.3	8.6	9.2	7.9	8.3
Continuity of care																					
A2_1	Patient assignment to specific provider, and use of that assignment to schedule and monitor supply and demand	9.3	10.1	10.4	9.3	9.5	9.9	10.7	10.6	8.8	9.6	8.8	9.7	10.2	8.5	9.2	9.0	9.8	10.4	9.7	9.0
A2_2	The extent to which patients are encouraged to, and usually see their own provider and practice team	9.9	10.4	10.5	9.9	9.6	10.6	10.6	10.6	9.7	10.2	9.3	10.2	10.3	9.5	8.2	9.9	10.0	10.4	9.4	9.8
Access to care																					
A2_3	Flexibility of appointment systems for different-length and same-day visits	10.2	10.5	10.5	10.5	10.4	10.1	10.4	10.4	10.2	10.5	10.3	10.5	10.7	10.1	10.5	10.5	10.6	10.4	10.6	10.4
A2_4	Asynchronous communication with practice team including patients' preferred mode	4.3	8.8	9.8	7.9	9.5	4.3	8.7	9.4	5.6	8.5	4.4	7.5	9.9	8.9	9.4	4.3	8.0	10.2	6.7	9.7

Table A.2a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_6	Patient after-hours access to a coverage team or the practice, and availability of patient EHR	8.2	10.0	10.2	8.5	9.0	6.9	9.8	10.1	7.6	8.7	8.2	10.3	10.3	8.1	8.2	8.2	10.2	10.7	9.1	9.3
Planned care for chronic conditions and preventive care																					
A2_7	Availability and proactive use of patient registries by practice teams	5.2	8.4	8.9	7.8	8.2	5.3	7.8	8.4	6.5	7.3	5.8	8.9	8.7	7.2	7.5	4.8	8.3	9.4	6.8	7.3
A2_8	Availability and use of evidence-based guidelines in care	7.6	8.9	9.0	8.7	9.0	8.0	8.8	8.9	8.2	8.5	8.1	8.5	9.2	8.5	9.0	7.8	9.0	9.3	8.4	8.5
A2_9	Focus of patient visits on acute and planned care needs	7.8	8.9	9.3	8.7	9.3	7.8	8.8	8.7	8.0	8.4	7.9	8.9	9.4	7.8	8.4	7.9	9.2	9.7	9.0	9.4
A2_10	The extent to which evidence-based reminders to providers are specific to the individual patient encounter	7.5	8.9	9.3	8.6	8.8	7.8	8.7	9.4	7.4	7.9	7.6	8.5	8.7	7.8	8.3	7.3	9.3	9.9	9.1	8.6
A2_11	Extent of role of nonphysician practice team members in providing clinical care	8.3	9.6	10.1	9.2	9.3	8.8	9.9	10.0	9.3	9.2	8.4	10.2	9.7	9.0	8.8	7.6	9.6	10.2	8.7	9.5
A2_12	Extent to which medication reconciliation occurs regularly and is documented in the patient's medical record	10.2	10.7	10.9	10.5	10.6	10.3	10.7	10.9	10.5	9.8	10.4	10.7	10.9	10.6	10.6	10.6	11.0	11.2	10.5	11.2
Risk-stratified care management																					
A2_16	Degree to which a standard method or tool to stratify patients by risk level is used and guides care delivery	3.8	9.7	10.2	7.0	7.7	3.9	10.1	10.2	5.7	6.7	3.6	9.2	10.0	5.4	6.7	3.9	9.9	10.2	7.0	7.9
A2_17	The provision of clinical care management services for high-risk patients by care managers integrated into the practice team	4.8	10.5	10.5	7.1	8.1	4.0	10.6	9.8	6.6	7.8	4.8	10.6	10.3	6.6	7.6	4.9	10.2	10.3	7.5	7.8

Table A.2a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_18	The availability of registry or panel-level data to assess and manage care for practice populations	5.4	8.7	9.0	7.2	7.9	5.4	8.8	8.8	6.4	7.0	6.1	8.9	9.1	6.9	7.2	5.3	8.2	8.9	6.9	6.9
Patient and caregiver engagement																					
A2_19	Assessment and incorporation of patient and family preferences in planning and organizing care	6.6	8.1	8.5	8.2	8.0	7.1	7.8	8.4	8.0	7.4	5.9	8.2	7.8	8.2	7.7	6.7	7.7	8.4	8.4	7.7
A2_20	How systematically practice teams involve patients in decision making	6.9	8.1	8.8	8.3	8.6	7.0	7.8	8.6	7.7	7.9	7.2	8.4	8.2	8.0	8.0	6.7	8.2	9.0	8.2	8.3
A2_21	Extent to which patient comprehension of written and verbal communication is assessed and accomplished	6.3	7.7	8.0	7.4	8.1	6.4	7.1	7.6	7.0	7.2	6.2	7.4	7.3	6.4	7.6	6.4	7.6	8.1	8.6	8.4
A2_22	The type of self-management support provided by members of the practice team	5.9	7.8	8.5	6.9	7.3	5.9	7.5	7.8	7.2	7.3	5.7	7.9	8.7	6.9	6.8	5.6	7.2	8.2	6.9	6.5
A2_23	How test results and care plans are communicated to patients	8.7	9.4	10.0	9.9	10.0	8.9	8.6	9.7	9.8	9.5	8.9	9.5	10.1	9.6	9.6	8.6	9.2	10.3	10.4	10.6
A2_24	The use of feedback from a patient and family caregiver council to guide practice improvements	5.4	6.1	7.0	6.8	7.1	5.5	5.8	6.3	6.4	6.2	4.7	8.1	8.6	6.8	7.3	4.6	6.0	6.2	7.3	6.6
Coordination of care across the medical neighborhood																					
A2_14	The extent of tracking of patient referrals to specialists	7.8	8.8	9.2	9.3	9.8	8.3	8.9	9.3	8.9	9.7	7.9	9.1	8.9	8.7	8.9	7.1	8.2	9.1	8.9	8.4
A2_15	The collaborative development of care plans with patients and families that include self-management and clinical management goals, and are used to guide care	6.5	8.4	8.8	8.0	8.4	6.2	7.7	7.9	7.6	8.1	6.5	8.2	9.4	7.7	7.9	6.8	8.3	8.9	8.3	8.2

Table A.2a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_26	The extent to which referral relationships with a range of specialists are formalized	7.2	5.9	6.4	6.8	7.8	7.8	4.4	6.2	5.5	7.3	7.1	6.4	7.1	5.4	5.9	6.7	5.6	6.7	6.5	6.8
A2_27	Availability of behavioral health services for patients	5.8	6.7	7.2	6.9	6.6	6.0	6.4	6.9	6.7	6.5	5.9	8.1	8.8	6.1	6.4	5.8	7.0	7.0	6.9	5.4
A2_28	The ease of obtaining referrals for specialty care, hospital care, or supportive community-based resources and exchange of relevant information with other providers before and after the patient visit	8.5	9.2	9.4	9.2	9.8	9.1	9.4	9.6	8.8	9.8	8.1	9.6	9.7	8.3	9.5	8.3	9.4	9.5	9.1	9.9
A2_29	Practice staff follow-up with patients following ED/hospital visits	7.2	9.9	10.4	9.2	9.3	6.9	10.1	10.3	8.6	8.7	7.0	10.1	10.2	8.3	8.5	7.8	9.9	10.3	9.6	10.0
A2_30	How practices link patients to supportive community-based resources	5.9	8.2	8.6	7.1	7.4	5.8	8.5	7.5	6.0	6.9	5.8	8.3	8.5	6.1	6.7	5.7	7.6	8.7	7.5	8.1
A2_31	Transmission of patient information when this practice refers patients to hospitals, EDs, and specialists	8.7	9.6	9.8	10.0	10.1	9.4	10.3	10.3	10.6	10.6	8.7	9.9	9.9	9.4	10.0	7.7	8.7	9.0	8.8	9.7
A2_32	The timeliness of information received from hospitals and EDs following a patient's visit	6.9	8.6	9.2	8.3	8.6	6.3	8.2	9.2	8.2	7.5	7.9	8.8	9.3	8.0	8.4	6.5	8.3	8.4	8.5	8.8
A2_34	The proportion of patients for whom the practice knows the total cost to payers for medical care	2.8	5.0	5.9	4.9	5.3	3.0	4.5	5.5	4.7	5.4	2.9	5.7	6.7	4.7	4.9	2.9	5.0	5.4	4.3	4.5
Continuous improvement driven by data																					
A2_35	Practice's use of quality improvement (QI) activities that are continuous and based on proven improvement strategies	6.7	8.7	8.8	8.5	8.6	6.5	8.8	8.2	7.2	7.0	7.2	9.1	9.4	8.2	8.3	5.7	8.5	8.7	9.5	8.1

Table A.2a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_36	Extent to which QI activities are conducted by practice teams supported by a QI infrastructure with meaningful involvement of patients and their families	4.9	7.3	7.5	6.5	6.9	4.4	7.1	7.0	4.9	5.3	5.2	8.0	8.5	6.1	5.8	4.0	6.8	7.0	6.6	6.7
A2_37	The availability of comprehensive performance measures to practice site and individual providers	6.8	9.2	9.8	8.2	8.8	6.1	9.0	9.2	6.7	6.8	7.7	9.2	9.9	8.1	8.5	5.4	9.3	9.7	8.3	8.3
A2_38	Availability of feedback reports on patient care experiences, and care processes or outcomes to practice site, individual providers, practice teams, patients, other teams, and external agencies	4.4	7.7	8.1	5.8	6.5	3.7	7.1	7.7	4.3	5.6	4.2	6.9	7.9	6.2	6.3	3.3	7.7	8.2	5.3	6.1
A2_39	The availability of staff, resources, and time for QI activities	5.4	7.2	7.7	6.9	7.3	5.4	7.4	7.1	5.8	6.7	5.8	7.6	7.7	6.3	6.9	4.8	7.3	7.8	6.9	6.9
A2_40	The extent to which hiring and training processes focus on improving care and creating patient-centered care	6.0	7.4	8.0	7.3	8.0	6.7	7.6	8.3	7.8	7.9	6.3	7.2	7.7	6.8	7.5	5.7	7.4	7.6	6.8	7.8
A2_41	The extent to which responsibility for conducting QI activities is shared by staff and is made explicit through protected time to meet and specific resources to engage in QI	5.7	8.2	8.3	6.9	7.8	5.6	8.4	7.9	5.4	6.8	6.7	8.6	8.9	6.6	6.9	4.8	7.9	8.0	7.8	7.3
Questions not included in M-PCMH-A scales[b]																					
A2_5	The availability of scheduled phone visits or group visits with the physician, PA, NP, or nurse	n.a.	4.1	4.2	3.3	3.8	n.a.	4.1	4.2	3.1	3.9	n.a.	3.2	4.2	2.4	3.1	n.a.	3.2	3.7	2.8	2.3

Table A.2a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_13	The extent to which practices notify patients of their laboratory and radiology results	10.5	10.7	10.7	11.1	11.1	10.2	10.5	10.9	11.5	11.1	10.9	10.9	10.5	11.3	11.1	10.6	10.7	10.9	11.3	10.9
A2_25	The use of shared decision making aids to help patients and providers jointly decide on treatment options	n.a.	8.1	9.2	6.8	7.3	n.a.	7.9	8.8	7.0	6.4	n.a.	9.7	8.8	5.5	6.0	n.a.	8.6	9.4	6.4	7.5
A2_33	Timely receipt of information about patients after they visit specialists in the community	n.a.	7.6	8.0	8.1	8.4	n.a.	7.3	7.7	7.6	7.9	n.a.	7.5	8.3	7.4	7.6	n.a.	7.7	7.7	8.8	8.0

Sources: CPC practice surveys administered to CPC practices October through December 2012, and to CPC and comparison practices April through July 2014, and April through August 2015.

Notes: Question numbers pertain to the 2015 CPC practice survey.

Composite scores for the seven M-PCMH-A domains are first calculated at the practice level. Practice-level composite scores are weighted averages of each practices' response to all questions in a given domain. The weights are derived from a factor analysis conducted on the responses of CPC practices to the 2012 practice survey that reflect the reliability of each question in measuring the domain. If a practice skipped a question, we rescaled the weights of the nonmissing questions in the domain so that the sum of the weights equals 1, regardless of whether one or more responses were missing. After we created composite scores for each domain, we calculated a reliability-weighted summary measure, the "overall M-PCMH-A score," composed of a weighted average of the composite scores for each of the seven domains. We then averaged composite scores across all practices to calculate the sample-wide composite scores. We assigned practice-level weights to comparison practices that were equal to the product of a matching weight and nonresponse weight.

[a] The sample sizes presented here are the largest sample sizes for each group (CPC or comparison), year, and region across the 41 M-PCMH-A questions. Table A.4a lists question-by-question sample sizes.

[b] Four questions are not included in the composite scores for the seven M-PCMH-A domains, because three questions were not asked in the first survey round (A2_5, A2_25, A2_33), and one question (A2_13) was determined to be not statistically related to any function of primary care delivery in our factor analysis.

n.a. = not applicable, because the question was not asked in the given survey round; M-PCMH-A = Patient-Centered Medical Home Assessment modified for the CPC evaluation; PA = physician assistant; NP = nurse practitioner; ER = emergency room; EHR = electronic health record; QI = quality improvement.

Table A.2b. Mean CPC and comparison practice responses to M-PCMH-A questions in 2012, 2014, and 2015, by region (NY, OH/KY, OK, OR)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
	Sample size[a]	74	74	74	44	36	75	75	75	72	55	63	63	63	48	42	66	66	66	55	43
M-PCMH-A scales (scale: 1 [least advanced approach]–12 [best approach])																					
A2_1-2	Continuity of care	9.9	10.4	10.4	9.6	9.6	9.9	10.1	10.2	10.1	10.1	9.5	10.1	10.9	9.3	8.5	9.3	10.5	10.4	9.6	10.4
A2_3, 4, 6	Access to care	7.2	9.4	9.8	9.2	9.2	7.5	10.4	10.4	10.1	10.5	5.8	9.2	9.4	7.6	9.0	7.6	9.9	10.3	9.0	10.0
A2_7-12	Planned care for chronic conditions and preventive care	7.4	8.4	8.9	9.2	9.1	8.0	9.7	9.7	9.6	10.1	6.8	9.3	9.5	8.4	8.5	7.9	9.2	9.6	9.0	9.7
A2_16-18	Risk-stratified care management	4.4	9.1	9.9	8.4	7.8	4.8	10.1	10.6	7.6	9.1	3.5	10.2	10.1	7.2	7.5	5.7	9.4	9.8	7.1	8.6
A2_19-24	Patient and caregiver engagement	6.6	7.7	8.4	8.2	8.4	7.2	8.3	8.9	8.3	9.0	6.0	8.0	8.5	7.8	8.0	6.9	7.8	8.6	7.3	8.3
A2_14-15, 26-32, 34	Coordination of care cross the medical neighborhood	6.8	7.6	8.3	8.7	8.6	6.9	8.1	8.7	8.3	8.9	6.2	8.1	8.2	7.8	8.2	6.9	8.3	8.7	8.0	8.5
A2_35-41	Continuous improvement driven by data	5.6	7.1	7.8	7.1	7.0	6.6	8.7	8.8	8.5	9.3	4.6	8.0	8.4	7.2	8.1	6.4	8.1	8.4	6.9	8.1
	Overall M-PCMH-A score	6.4	8.3	8.9	8.5	8.4	6.9	9.2	9.5	8.8	9.5	5.6	8.8	9.1	7.7	8.2	7.0	8.8	9.3	7.9	8.9
Continuity of care																					
A2_1	Patient assignment to specific provider, and use of that assignment to schedule and monitor supply and demand	9.7	10.1	10.5	9.2	9.4	9.4	9.8	9.8	9.9	9.8	8.8	10.0	10.8	9.4	9.1	9.2	10.5	10.3	9.4	10.1
A2_2	The extent to which patients are encouraged to, and usually see their own provider and practice team	10.0	10.7	10.3	10.1	9.7	10.3	10.3	10.5	10.5	10.4	10.1	10.2	11.1	10.0	8.0	9.3	10.5	10.4	9.9	10.7
Access to care																					
A2_3	Flexibility of appointment systems for different-length and same-day visits	10.8	10.7	10.6	10.8	10.3	10.4	10.7	10.6	11.2	11.1	9.2	10.3	9.8	9.3	9.5	10.2	10.4	10.4	11.0	10.4
A2_4	Asynchronous communication with practice team including patients' preferred mode	3.9	8.6	9.2	8.6	9.0	4.9	10.5	10.4	9.6	10.4	2.6	8.4	8.9	6.7	9.4	5.2	9.6	10.4	8.2	10.1

Table A.2b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_6	Patient after-hours access to a coverage team or the practice, and availability of patient EHR	8.8	9.5	10.0	8.9	9.0	8.8	10.2	10.3	10.0	10.0	7.6	9.6	9.8	7.3	8.2	8.8	9.9	10.0	8.5	9.7
Planned care for chronic conditions and preventive care																					
A2_7	Availability and proactive use of patient registries by practice teams	5.5	7.6	7.7	9.2	8.5	4.0	9.2	9.5	8.5	10.5	4.9	8.7	9.2	7.6	6.3	6.1	8.4	9.4	8.2	9.4
A2_8	Availability and use of evidence-based guidelines in care	7.2	8.4	8.5	8.5	8.9	7.9	9.3	9.0	9.6	9.9	6.6	9.3	8.9	8.5	8.7	7.9	9.2	9.3	8.8	9.2
A2_9	Focus of patient visits on acute and planned care needs	7.4	8.4	8.9	8.9	9.4	8.7	9.4	9.4	10.1	10.3	7.0	9.2	9.4	8.2	9.1	7.8	8.7	9.3	8.7	9.6
A2_10	The extent to which evidence-based reminders to providers are specific to the individual patient encounter	7.1	8.2	8.5	9.3	8.8	8.2	10.3	9.9	9.2	9.5	6.5	8.6	9.3	8.6	8.4	8.1	8.9	9.3	8.9	9.8
A2_11	Extent of role of nonphysician practice team members in providing clinical care	8.2	8.2	9.7	9.8	8.7	9.2	9.8	10.5	9.9	10.1	7.2	9.7	10.3	7.9	8.9	8.6	10.2	10.2	9.9	10.1
A2_12	Extent to which medication reconciliation occurs regularly and is documented in the patient's medical record	10.0	10.3	10.9	10.2	10.4	10.4	10.7	11.0	10.9	11.1	9.9	11.0	10.7	10.3	10.4	9.8	10.3	10.8	10.3	10.9
Risk-stratified care management																					
A2_16	Degree to which a standard method or tool to stratify patients by risk level is used and guides care delivery	4.1	9.9	10.5	8.4	7.0	4.1	9.7	10.5	8.1	9.0	3.1	10.4	10.7	7.3	8.0	3.6	8.7	9.5	6.6	8.1
A2_17	The provision of clinical care management services for high-risk patients by care managers integrated into the practice team	4.4	10.1	10.6	7.7	8.3	5.3	10.9	11.4	6.9	8.7	3.0	10.9	10.5	6.9	7.1	6.8	10.4	10.6	7.4	8.9

Table A.2b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_18	The availability of registry or panel-level data to assess and manage care for practice populations	5.0	6.9	8.4	7.8	8.1	5.1	9.6	9.8	7.9	9.7	4.5	9.2	8.9	6.9	7.3	6.8	9.1	9.4	7.5	8.9
Patient and caregiver engagement																					
A2_19	Assessment and incorporation of patient and family preferences in planning and organizing care	6.8	8.0	8.3	9.5	8.7	6.6	8.7	9.1	8.0	8.4	6.0	8.6	8.8	7.6	7.9	6.9	7.8	8.4	7.4	8.4
A2_20	How systematically practice teams involve patients in decision making	6.9	7.5	8.8	8.9	9.4	7.5	8.6	9.0	8.9	9.2	6.6	8.2	9.3	7.9	8.6	6.6	7.9	8.6	7.9	8.7
A2_21	Extent to which patient comprehension of written and verbal communication is assessed and accomplished	6.1	7.6	8.1	7.5	7.7	6.5	8.0	8.4	7.9	9.2	4.9	7.8	8.0	7.6	8.2	7.7	8.2	8.2	7.1	8.3
A2_22	The type of self-management support provided by members of the practice team	5.9	7.4	8.1	7.1	7.0	6.3	8.6	9.5	7.1	8.3	5.1	8.0	8.6	6.3	6.7	6.6	7.7	8.6	6.6	8.0
A2_23	How test results and care plans are communicated to patients	8.4	9.2	9.7	9.9	10.3	9.4	10.2	10.4	10.7	10.7	8.3	9.5	9.7	9.8	9.5	8.7	9.5	9.9	9.4	9.9
A2_24	The use of feedback from a patient and family caregiver council to guide practice improvements	5.6	6.7	6.9	6.6	7.3	7.5	5.4	6.8	7.4	8.1	5.0	5.4	6.4	7.6	7.2	4.7	5.3	8.1	5.6	6.6
Coordination of care across the medical neighborhood																					
A2_14	The extent of tracking of patient referrals to specialists	7.9	8.9	9.0	9.5	10.5	7.7	8.5	9.9	10.1	10.2	7.9	8.9	9.6	9.3	10.4	7.9	8.7	8.9	9.7	10.0
A2_15	The collaborative development of care plans with patients and families that include self-management and clinical management goals, and are used to guide care	6.0	8.4	8.5	8.9	9.5	7.3	9.0	9.5	7.9	9.3	6.4	9.2	8.3	7.7	7.1	6.0	8.3	8.9	7.5	8.4

Table A.2b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_26	The extent to which referral relationships with a range of specialists are formalized	7.0	5.9	6.4	7.7	8.8	7.0	6.4	6.4	8.5	9.8	7.1	6.5	5.4	7.3	8.1	7.5	6.1	6.5	6.3	7.2
A2_27	Availability of behavioral health services for patients	5.8	5.7	6.7	6.7	5.7	5.5	5.4	5.6	6.9	6.5	5.6	6.0	7.3	7.6	7.8	6.3	8.5	8.6	7.1	7.4
A2_28	The ease of obtaining referrals for specialty care, hospital care, or supportive community-based resources and exchange of relevant information with other providers before and after the patient visit	8.7	8.4	9.2	9.6	10.1	8.6	9.2	9.5	9.7	10.0	7.8	9.2	9.3	8.9	9.1	8.6	9.3	9.2	9.7	9.9
A2_29	Practice staff follow-up with patients following ED/hospital visits	7.5	9.7	10.6	10.7	9.8	7.2	10.1	10.8	9.2	9.6	6.4	9.6	9.8	8.3	9.1	7.4	9.8	10.6	9.1	9.3
A2_30	How practices link patients to supportive community-based resources	6.2	7.5	8.7	8.6	7.7	6.3	9.2	9.3	7.5	8.0	5.1	8.1	8.4	6.5	7.0	6.3	7.9	8.9	7.4	7.8
A2_31	Transmission of patient information when this practice refers patients to hospitals, EDs, and specialists	8.9	9.2	9.5	10.8	10.0	8.6	8.8	10.2	10.1	10.5	8.3	10.2	9.6	10.0	9.8	9.2	10.4	10.2	10.3	10.3
A2_32	The timeliness of information received from hospitals and EDs following a patient's visit	7.1	8.2	8.7	8.9	9.1	7.8	9.3	10.2	8.3	9.4	5.5	8.3	8.6	7.4	8.4	6.4	9.1	10.0	8.4	8.6
A2_34	The proportion of patients for whom the practice knows the total cost to payers for medical care	3.1	4.3	6.1	5.6	4.8	2.8	4.9	5.9	4.5	5.7	2.2	5.4	6.3	5.5	5.8	2.9	4.9	5.4	4.8	5.8
Continuous improvement driven by data																					
A2_35	Practice's use of quality improvement (QI) activities that are continuous and based on proven improvement strategies	6.5	7.8	8.0	8.4	8.0	8.2	9.3	9.4	9.2	9.8	5.7	8.5	8.7	8.0	9.1	7.2	9.0	9.1	8.6	9.4

Table A.2b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_36	Extent to which QI activities are conducted by practice teams supported by a QI infrastructure with meaningful involvement of patients and their families	4.5	6.5	6.8	6.2	6.1	5.6	7.4	8.0	8.2	8.8	4.4	7.4	6.5	7.2	7.2	5.8	8.1	8.3	6.3	8.4
A2_37	The availability of comprehensive performance measures to practice site and individual providers	6.3	7.6	9.2	7.5	8.8	8.1	10.4	10.9	9.8	10.2	5.5	9.4	9.7	7.7	8.7	8.5	9.6	10.2	8.6	9.7
A2_38	Availability of feedback reports on patient care experiences, and care processes or outcomes to practice site, individual providers, practice teams, patients, other teams, and external agencies	4.6	7.1	8.0	6.6	5.0	5.8	9.7	8.8	7.0	8.7	3.5	7.5	7.9	5.3	7.5	5.8	7.6	7.8	5.0	5.9
A2_39	The availability of staff, resources, and time for QI activities	5.6	6.6	7.1	6.8	6.6	6.1	7.2	8.0	7.8	8.8	4.3	7.7	8.8	7.0	7.5	5.4	6.9	7.6	7.2	7.2
A2_40	The extent to which hiring and training processes focus on improving care and creating patient-centered care	7.0	6.7	8.1	6.9	7.3	5.7	8.4	8.2	9.1	9.7	4.4	7.0	7.9	7.9	7.8	6.0	7.5	7.9	6.2	7.9
A2_41	The extent to which responsibility for conducting QI activities is shared by staff and is made explicit through protected time to meet and specific resources to engage in QI	5.2	7.3	7.8	6.7	7.1	6.8	8.8	8.5	8.3	9.6	4.4	8.0	9.0	7.5	8.5	6.5	8.2	8.1	5.9	8.0
Questions not included in M-PCMH-A scales[b]																					
A2_5	The availability of scheduled phone visits or group visits with the physician, PA, NP, or nurse	n.a.	4.1	4.7	3.9	4.4	n.a.	5.1	4.1	3.9	3.2	n.a.	4.3	3.7	3.5	4.7	n.a.	4.4	5.0	3.7	4.7

Table A.2b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_13	The extent to which practices notify patients of their laboratory and radiology results	10.4	10.7	10.5	10.7	11.1	10.6	11.1	10.7	11.3	11.1	10.5	10.6	10.8	11.3	11.3	10.3	10.3	10.7	10.6	10.8
A2_25	The use of shared decision making aids to help patients and providers jointly decide on treatment options	n.a.	8.1	9.2	7.9	7.2	n.a.	7.1	9.8	7.3	8.5	n.a.	7.5	8.6	7.0	7.4	n.a.	7.8	9.6	6.5	8.1
A2_33	Timely receipt of information about patients after they visit specialists in the community	n.a.	7.7	8.4	8.6	9.2	n.a.	7.7	8.4	8.2	8.9	n.a.	7.5	7.4	8.3	8.5	n.a.	8.2	8.3	7.8	8.2

Sources: CPC practice surveys administered to CPC practices October through December 2012, and to CPC and comparison practices April through July 2014, and April through August 2015.

Notes: Question numbers pertain to the 2015 CPC practice survey.

Composite scores for the seven M-PCMH-A domains are first calculated at the practice level. Practice-level composite scores are weighted averages of each practices' response to all questions in a given domain. The weights are derived from a Factor Analysis conducted on the responses of CPC practices to the 2012 practice survey that reflect the reliability of each question in measuring the domain. If a practice skipped a question, we rescaled the weights of the nonmissing questions in the domain so that the sum of the weights equals 1, regardless of whether one or more responses were missing. After we created composite scores for each domain, we calculated a reliability-weighted summary measure, the "overall M-PCMH-A score," composed of a weighted average of the composite scores for each of the seven domains. We then averaged composite scores across all practices to calculate the sample-wide composite scores. We assigned practice-level weights to comparison practices that were equal to the product of a matching weight and nonresponse weight.

[a] The sample sizes presented here are the largest sample sizes for each group (CPC or comparison), year, and region across the 41 M-PCMH-A questions. Table A.4a lists question-by-question sample sizes.

[b] Four questions are not included in the composite scores for the seven M-PCMH-A domains, because three questions were not asked in the first survey round (A2_5, A2_25, A2_33), and one question (A2_13) was determined to be not statistically related to any function of primary care delivery in our Factor Analysis.

n.a. = not applicable, because the question was not asked in the given survey round; M-PCMH-A = Patient-Centered Medical Home Assessment modified for the CPC evaluation; PA = physician assistant; NP = nurse practitioner; ER = emergency room; EHR = electronic health record; QI = quality improvement.

Table A.3. CPC practice characteristics by M-PCMH-A score

	Overall M-PCMH-A score						
	N	2012	2014	2015	2012 to 2014 difference	2014 to 2015 difference	2012 to 2015 difference
CPC-wide mean	483	6.5	8.7	9.1	2.3***	0.4***	2.7***
CPC practice characteristics							
Practice size in 2012							
1–2 clinicians	153	6.4	8.6	9.0	2.2***	0.4***	2.6***
3–4 clinicians	160	6.6	8.8	9.2	2.2***	0.4***	2.6***
5–10 clinicians	137	6.4	8.9	9.2	2.4***	0.4***	2.8***
11 or more clinicians	33	6.5	8.4	9.0	2.0***	0.6***	2.5***
Ownership in 2012							
Private physician or clinician owned	261	6.5	8.8	9.1	2.3***	0.3***	2.6***
Hospital/system owned/academic medical center	180	6.3	8.6	9.1	2.3***	0.5***	2.8***
Insurance company, health plan, or HMO	**3**	**6.9**	**10.3**	**10.1**	**3.4**	**-0.2**	**3.2**
Other	57	6.7	8.6	9.3	1.9***	0.7***	2.6***
CPC funding per clinician in 2013 (practice-level median)							
Bottom tertile	159	6.6	8.9	9.1	2.2***	0.3***	2.5***
Middle tertile	162	6.2	8.6	9.2	2.4***	0.7***	3.0***
Top tertile	158	6.6	8.8	9.2	2.2***	0.3***	2.6***
Autonomy to implement practice-level change in 2014							
Staff hiring							
High autonomy	98	7.0	9.0	9.3	2.0***	0.3**	2.3***
No–moderate autonomy	121	6.0	8.5	9.1	2.5***	0.6***	3.1***
Organization priorities, such as picking quality improvement goals							
High autonomy	66	6.6	9.0	9.4	2.4***	0.4***	2.8***
No–moderate autonomy	153	6.4	8.7	9.2	2.2***	0.5***	2.7***
Clinical work processes							
High autonomy	148	6.7	8.8	9.2	2.1***	0.4***	2.5***
No–moderate autonomy	71	6.0	8.5	9.2	2.5***	0.6***	3.2***
Planning for and completion of CPC Milestones							
High autonomy	94	6.3	9.0	9.3	2.7***	0.3***	3.0***
No–moderate autonomy	124	6.6	8.5	9.1	1.9***	0.6***	2.6***
Practice learning and assistance in 2014: Who does the regional learning faculty directly communicate with?							
Staff in this practice site and/or a combination of practice site and group-level staff	419	6.5	8.8	9.2	2.3***	0.4***	2.7***
Staff in our larger health care system or medical group	56	6.2	8.4	9.1	2.2***	0.7***	2.9***
None of the staff in this practice site or in our larger health care system or medical group	**1**	**11.8**	**7.3**	**10.2**	**-4.5**	**2.9**	**-1.6**

Table A.3. (*continued*)

	Overall M-PCMH-A score					
	N	2012	2014	2015	2012 to 2014 difference	2014 to 2015 difference	2012 to 2015 difference
Percentage of beneficiaries from an urban area at baseline (2012)							
Bottom tertile	164	6.2	8.7	9.1	2.4***	2.8***	0.4***
Middle tertile	162	6.6	8.7	9.1	2.1***	2.5***	0.4***
Top tertile	157	6.6	8.8	9.2	2.2***	2.7***	0.4***
Clinician compensation in 2014							
Among clinician owners:							
Salary	195	6.7	8.8	9.1	2.1***	0.3***	2.4***
Productivity incentives	171	6.7	8.6	9.1	1.9***	0.5***	2.4***
Quality incentives	85	6.4	8.9	9.4	2.5***	0.5***	3.0***
Among clinician non-owners:							
Salary	363	6.4	8.7	9.2	2.3***	0.5***	2.8***
Productivity incentives	268	6.5	8.7	9.2	2.2***	0.5***	2.7***
Quality incentive	176	6.7	8.7	9.3	2.0***	0.6***	2.6***
Participation in PCMH, EHR, and HIE initiatives							
PCMH recognition in 2012							
Yes	202	7.2	8.8	9.3	1.6***	0.5***	2.1***
No	281	6.0	8.7	9.0	2.7***	0.4***	3.1***
Use of data reports from EHR to guide quality improvement in 2014							
Yes	468	6.5	8.8	9.2	2.3***	0.4***	2.7***
No	15	5.9	7.6	8.4	1.7***	0.8**	2.5***
Initial application score							
CMS score of the practice							
Bottom tertile	163	6.0	8.5	9.0	2.5***	0.4***	3.0***
Middle tertile	176	6.3	8.8	9.2	2.5***	0.4***	2.9***
Top tertile	144	7.2	8.9	9.3	1.7***	0.4***	2.1***
Baseline modified PCMH-A (M-PCMH-A) score							
M-PCMH-A score at baseline (2012)							
Bottom tertile	160	4.9	8.5	8.9	3.7***	0.4***	4.0***
Middle tertile	163	6.4	8.6	9.1	2.2***	0.5***	2.7***
Top tertile	160	8.2	9.0	9.4	0.9***	0.4***	1.2***

Table A.3. (*continued*)

	Overall M-PCMH-A score						
	N	2012	2014	2015	2012 to 2014 difference	2014 to 2015 difference	2012 to 2015 difference
Staffing changes							
Changes in staff made by 2014 as a result of the CPC initiative							
Hired or contracted staff to fill new roles, or hired new staff to fill existing roles	420	6.5	8.7	9.2	2.2***	0.5***	2.6***
Moved existing staff into new roles or functions	298	6.6	8.8	9.2	2.2***	0.4***	2.6***
Moved clinicians from other practice sites to this practice site	21	6.7	8.7	9.1	1.9***	0.4	2.4***
Moved nonclinician staff from other practice sites to this practice site	20	6.4	8.3	9.2	1.9***	0.9***	2.8***
No change or eliminated staff	**3**	**4.1**	**8.9**	**8.6**	**4.7***	**-0.2**	**4.5***
Assessment of CPC							
How much has participation in the CPC initiative improved the quality of care that this practice currently provides to its patients?							
A lot	216	6.6	8.9	9.3	2.3***	0.4***	2.7***
Somewhat	224	6.4	8.7	9.1	2.3***	0.4***	2.7***
Not very much	31	6.4	8.2	8.6	1.8***	0.4*	2.2***
Not at all	**5**	**6.3**	**8.4**	**9.1**	**2.1*** **	**0.7**	**2.8*** **

Sources: Mathematica analysis of the 2012, 2014, and 2015 CPC practice surveys administered October through December 2012, April through July 2014, and April through August 2015, respectively.

Notes: Scale: 1 (least advanced approach)–12 (best approach).

Bolded row indicates fewer than 10 respondents in that category.

*/**/*** Statistically different from zero at the 0.1/0.05/0.01 level

M-PCMH-A = Patient-Centered Medical Home Assessment modified for the CPC evaluation; PCMH = Patient-Centered Medical Home; EHR = electronic health record; HMO = health maintenance organization; HIE = health information exchange.

Table A.4a. Distributions of CPC and comparison practice responses to M-PCMH-A questions in 2012, 2014, and 2015, overall and by region (AR, CO, NJ) (percentage of practices)

		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
Question		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
M-PCMH-A scales (scale: 1 [least advanced approach]–12 [best approach])																					
A2_1-2	Continuity of care																				
10 to 12	High	51.0	63.8	65.9	57.2	52.7	63.6	72.7	74.2	51.6	66.7	38.9	47.2	50.0	49.3	44.9	44.1	58.8	66.2	56.8	37.9
7 to 9	Medium high	39.1	33.7	31.4	28.3	34.4	28.8	25.8	22.7	28.2	25.6	47.2	52.8	47.2	29.9	18.6	42.6	33.8	29.4	30.6	57.7
4 to 6	Medium low	7.6	1.9	2.1	6.6	10.4	6.1	0.0	1.5	10.1	4.0	9.7	0.0	2.8	9.3	32.9	8.8	4.4	1.5	10.3	1.4
1 to 3	Low	2.3	0.6	0.6	8.0	2.6	1.5	1.5	1.5	10.1	3.7	4.2	0.0	0.0	11.5	3.5	4.4	2.9	2.9	2.3	3.0
	N	484	484	484	353	339	66	66	66	62	64	72	72	72	69	58	68	68	68	37	42
A2_3, 4, 6	Access to care																				
10 to 12	High	6.8	53.3	64.1	37.0	53.8	3.0	51.5	59.1	12.6	38.9	8.3	40.3	70.8	39.9	40.4	5.9	48.5	70.6	36.3	50.8
7 to 9	Medium high	40.3	36.6	30.6	35.5	34.0	36.4	36.4	34.8	31.4	41.5	31.9	48.6	29.2	41.9	47.7	39.7	38.2	26.5	36.1	44.1
4 to 6	Medium low	50.4	9.1	5.0	25.1	10.6	57.6	10.6	4.5	52.0	18.3	59.7	11.1	0.0	15.2	9.0	52.9	13.2	2.9	27.6	5.1
1 to 3	Low	2.5	1.0	0.4	2.4	1.6	3.0	1.5	1.5	3.9	1.3	0.0	0.0	0.0	3.0	2.8	1.5	0.0	0.0	0.0	0.0
	N	484	484	484	421	340	66	66	66	81	64	72	72	72	75	58	68	68	68	46	42
A2_7-12	Planned care for chronic conditions and preventive care																				
10 to 12	High	6.8	29.5	37.3	29.7	32.3	10.6	27.3	34.8	22.4	18.9	11.1	30.6	31.9	10.8	22.9	5.9	27.9	50.0	41.1	28.1
7 to 9	Medium high	57.0	61.8	58.2	49.7	52.4	57.6	65.2	57.6	38.1	53.4	62.5	61.1	66.7	64.8	48.8	57.4	69.1	45.6	31.6	57.1
4 to 6	Medium low	35.3	8.7	4.6	20.2	14.8	31.8	7.6	7.6	39.5	27.0	26.4	8.3	1.4	23.2	26.4	33.8	2.9	4.4	26.2	14.8
1 to 3	Low	0.8	0.0	0.0	0.5	0.5	0.0	0.0	0.0	0.0	0.7	0.0	0.0	0.0	1.2	2.0	2.9	0.0	0.0	1.1	0.0
	N	484	484	483	353	340	66	66	66	61	64	72	72	72	69	58	68	68	68	37	42
A2_16-18	Risk-stratified care management																				
10 to 12	High	1.7	44.6	58.6	20.5	28.1	3.0	53.0	54.5	16.8	30.5	1.4	34.7	44.4	9.0	15.2	1.5	48.5	45.6	24.3	25.9
7 to 9	Medium high	18.0	51.0	37.3	36.2	34.1	9.1	40.9	34.8	17.2	26.2	19.4	62.5	50.0	35.4	40.0	17.6	47.1	52.9	31.4	34.2
4 to 6	Medium low	36.2	4.1	3.9	23.8	26.0	42.4	6.1	9.1	35.6	24.3	33.3	1.4	5.6	30.8	29.5	36.8	4.4	1.5	17.5	29.2
1 to 3	Low	44.2	0.2	0.2	19.5	11.8	45.5	0.0	1.5	30.3	19.0	45.8	1.4	0.0	24.8	15.2	44.1	0.0	0.0	26.8	10.6
	N	484	484	483	419	340	66	66	66	80	64	72	72	72	75	58	68	68	68	46	42
A2_19-24	Patient and caregiver engagement																				
10 to 12	High	3.1	9.7	12.4	17.8	18.9	4.5	6.1	10.6	10.1	13.3	1.4	6.9	8.3	12.1	6.1	1.5	10.3	13.2	28.7	20.0
7 to 9	Medium high	34.9	61.4	74.6	46.8	49.1	34.8	50.0	65.2	42.7	46.6	31.9	75.0	75.0	46.4	61.3	27.9	54.4	75.0	41.7	44.8
4 to 6	Medium low	56.6	27.5	12.4	33.8	30.4	56.1	42.4	19.7	45.3	40.0	63.9	16.7	16.7	36.4	27.4	64.7	35.3	11.8	29.6	35.1
1 to 3	Low	5.4	1.4	0.6	1.7	1.7	4.5	1.5	4.5	1.8	0.0	2.8	1.4	0.0	5.1	5.2	5.9	0.0	0.0	0.0	0.0
	N	484	484	484	419	340	66	66	66	81	64	72	72	72	75	58	68	68	68	46	42

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_14-15, 26-32, 34	Coordination of care across the medical neighborhood																				
10 to 12	High	2.7	7.6	12.2	13.3	15.7	1.5	6.1	9.1	3.3	16.6	2.8	1.4	6.9	5.1	2.2	0.0	11.8	8.8	16.2	14.7
7 to 9	Medium high	37.4	67.1	77.5	53.8	62.0	45.5	62.1	75.8	45.9	56.5	31.9	84.7	84.7	49.1	71.2	38.2	55.9	76.5	40.0	42.9
4 to 6	Medium low	56.0	24.8	9.7	31.9	21.7	51.5	30.3	13.6	50.8	25.6	63.9	13.9	8.3	40.8	24.9	54.4	32.4	13.2	43.1	41.9
1 to 3	Low	3.9	0.4	0.6	1.0	0.6	1.5	1.5	1.5	0.0	1.4	1.4	0.0	0.0	5.0	1.7	7.4	0.0	1.5	0.7	0.5
	N	484	484	484	420	340	66	66	66	81	64	72	72	72	75	58	68	68	68	46	42
A2_35-41	Continuous improvement driven by data																				
10 to 12	High	2.9	13.2	21.9	14.3	20.9	3.0	13.6	13.6	12.1	9.8	4.2	12.5	26.4	7.7	20.9	0.0	11.8	27.9	11.2	11.3
7 to 9	Medium high	26.9	57.6	55.4	40.0	43.5	21.2	54.5	53.0	24.9	43.5	30.6	63.9	55.6	43.0	31.4	22.1	57.4	41.2	46.0	52.4
4 to 6	Medium low	46.1	26.7	21.1	29.8	25.4	45.5	28.8	28.8	24.5	20.1	54.2	22.2	18.1	36.1	31.0	36.8	29.4	30.9	36.2	30.2
1 to 3	Low	24.2	2.5	1.7	15.9	10.2	30.3	3.0	4.5	38.5	26.6	11.1	1.4	0.0	13.2	16.8	41.2	1.5	0.0	6.6	6.1
	N	484	484	484	420	339	66	66	66	82	64	72	72	72	75	58	68	68	68	46	42
	Overall M-PCMH-A score																				
10 to 12	High	2.5	13.0	19.9	16.1	19.0	3.0	9.1	19.7	3.8	12.9	1.4	8.3	16.7	6.8	14.0	0.0	16.2	26.5	27.0	13.6
7 to 9	Medium high	33.1	80.0	75.6	50.3	60.6	33.3	86.4	71.2	41.1	55.6	31.9	86.1	80.6	48.1	58.0	32.4	77.9	70.6	40.1	58.5
4 to 6	Medium low	61.8	6.8	4.6	33.1	20.0	60.6	3.0	9.1	55.1	30.8	66.7	5.6	2.8	43.8	27.4	64.7	5.9	2.9	32.9	27.9
1 to 3	Low	2.7	0.2	0.0	0.6	0.5	3.0	1.5	0.0	0.0	0.7	0.0	0.0	0.0	1.2	0.6	2.9	0.0	0.0	0.0	0.0
	N	484	484	483	350	339	66	66	66	60	64	72	72	72	69	58	68	68	68	37	42
Continuity of care																					
A2_1	Patient assignment to providers																				
10 to 12	Assigned to panels; panel assignments routinely used for scheduling and monitored to balance supply and demand	43.1	60.5	70.7	54.9	54.5	59.1	75.8	74.2	59.4	60.1	34.7	48.6	63.9	36.3	51.8	39.7	60.3	73.5	54.2	43.2
7 to 9	Assigned to panels; panel assignments routinely used by practice for scheduling	46.6	36.0	27.3	28.9	35.2	33.3	22.7	24.2	9.0	30.6	48.6	50.0	34.7	41.2	34.9	44.1	32.4	22.1	41.7	38.7
4 to 6	Assigned to panels; panel assignments not routinely used by practice	7.5	3.1	1.2	7.7	5.6	4.5	0.0	0.0	20.2	3.1	11.1	1.4	1.4	12.1	8.7	13.2	5.9	1.5	1.8	16.2
1 to 3	Not assigned to panels	2.9	0.4	0.8	8.6	4.7	3.0	1.5	1.5	11.4	6.3	5.6	0.0	0.0	10.4	4.6	2.9	1.5	2.9	2.3	2.0
	N	483	483	484	348	338	66	66	66	62	64	72	72	72	69	58	68	68	68	37	42

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_2	Patients are encouraged to see their paneled provider and practice team																				
10 to 12	By practice team; priority in scheduling appointments and patients usually see their own provider/practice team	66.3	74.9	75.4	71.2	67.4	75.8	78.8	80.3	64.3	77.4	51.4	73.2	63.9	70.8	57.8	64.7	63.2	69.1	55.3	58.8
7 to 9	By practice team; priority in scheduling appointments, but patients commonly see other providers	27.3	23.2	22.9	18.4	20.4	22.7	19.7	16.7	22.9	17.6	38.9	26.8	33.3	17.3	7.7	26.5	32.4	27.9	32.1	36.7
4 to 6	By practice team; not a priority in scheduling appointments	4.3	0.8	0.8	1.3	3.7	0.0	0.0	0.0	2.7	0.7	5.6	0.0	2.8	0.3	15.1	7.4	1.5	0.0	2.5	1.4
1 to 3	Only at patient's request	2.1	1.0	0.8	9.1	8.5	1.5	1.5	3.0	10.1	4.3	4.2	0.0	0.0	11.5	19.4	1.5	2.9	2.9	10.2	3.0
	N	484	482	484	353	338	66	66	66	62	64	72	71	72	69	57	68	68	68	37	42
Access to care																					
A2_3	Appointment systems																				
10 to 12	Flexible and accommodate customized visit lengths, same-day visits, scheduled follow-up, and multiple provider visits	71.1	79.3	75.2	74.8	70.9	65.2	73.8	69.7	62.3	68.3	75.0	84.5	87.5	71.3	76.1	76.5	79.4	77.9	84.3	84.5
7 to 9	Flexible and include capacity for same-day visits	27.3	19.4	23.3	18.9	25.2	31.8	21.5	30.3	36.1	26.9	22.2	15.5	12.5	18.3	23.1	23.5	20.6	19.1	5.7	7.8
4 to 6	Provide some flexibility in scheduling different visit lengths	1.2	0.8	0.8	5.4	3.2	1.5	3.1	0.0	0.8	3.7	2.8	0.0	0.0	9.8	0.8	0.0	0.0	0.0	10.0	7.7
1 to 3	Limited to single office-visit type	0.4	0.4	0.6	0.9	0.7	1.5	1.5	0.0	0.8	1.1	0.0	0.0	0.0	0.7	0.0	0.0	0.0	2.9	0.0	0.0
	N	484	479	484	351	339	66	65	66	61	64	72	71	72	68	58	68	68	68	37	42
A2_4	Communication with the practice team through email, text messaging, or patient portal																				
10 to 12	Generally available; patients are regularly asked about their communication preferences	7.1	62.0	76.6	53.0	70.7	3.0	61.5	72.7	24.3	67.4	11.1	44.4	70.8	69.0	77.5	7.4	50.0	76.5	39.9	71.0
7 to 9	Generally available at a patient's request	14.3	14.9	12.4	12.9	14.4	16.7	15.4	12.1	18.8	8.6	13.9	16.7	16.7	7.2	8.6	16.2	19.1	14.7	9.4	11.2

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Available on limited basis for practice patients	23.9	10.4	6.2	10.6	4.8	27.3	13.8	10.6	16.9	4.8	15.3	15.3	12.5	12.2	3.2	26.5	13.2	7.4	15.4	13.3
1 to 3	Not regularly available to practice patients	54.7	12.7	4.8	23.5	10.1	53.0	9.2	4.5	40.1	19.2	59.7	23.6	0.0	11.6	10.8	50.0	17.6	1.5	35.3	4.6
	N	481	482	483	352	339	66	65	66	61	63	72	72	72	68	58	68	68	68	37	42
A2_6[a]	After-hours access to a physician, PA/NP, or nurse																				
10 to 12	Available via email or phone or in person	25.3	61.7	68.1	36.5	40.7	16.7	63.6	74.2	19.6	32.2	22.2	65.3	76.4	32.3	35.0	30.9	65.7	85.3	46.4	40.0
7 to 9	Available from coverage arrangement; shares necessary patient data with and provides summary to practice	54.2	34.2	28.4	41.6	47.4	42.4	30.3	16.7	49.1	52.8	54.2	31.9	22.2	43.1	40.8	48.5	34.3	10.3	34.8	55.6
4 to 6	Available from coverage arrangement; no standard communication protocol for urgent problems	16.8	2.3	2.3	15.6	6.9	27.3	1.5	6.1	19.4	13.0	23.6	2.8	1.4	13.8	15.9	16.2	0.0	1.5	18.7	1.9
1 to 3	Not available or limited to an answering machine	3.7	1.9	1.2	6.2	5.0	13.6	4.5	3.0	11.8	2.0	0.0	0.0	0.0	10.8	8.2	4.4	0.0	2.9	0.0	2.5
	N	483	483	483	420	338	66	66	66	81	64	72	72	72	75	58	68	67	68	46	42
Planned care for chronic conditions and preventive care																					
A2_7	Registries–either integrated in the EHR or free-standing–on individual patients																				
10 to 12	Available and routinely used across comprehensive set of diseases and risk states	8.3	40.2	44.5	39.4	40.0	7.6	31.8	43.9	23.1	25.1	9.9	50.0	31.9	25.4	32.0	8.8	35.3	50.7	28.7	26.6
7 to 9	Available and routinely used, but only for a limited number of diseases and risk states	26.6	37.7	39.7	23.0	27.6	24.2	39.4	27.3	19.7	40.9	33.8	30.6	56.9	35.1	25.8	22.1	44.1	35.8	24.9	31.4
4 to 6	Available but not routinely used	34.6	16.6	12.5	24.4	21.6	43.9	19.7	24.2	30.3	19.7	39.4	19.4	9.7	25.7	32.0	32.4	16.2	11.9	22.4	30.1
1 to 3	Not available	30.5	5.6	3.3	13.2	10.8	24.2	9.1	4.5	26.8	14.4	16.9	0.0	1.4	13.8	10.2	36.8	4.4	1.5	23.9	11.8
	N	482	483	479	352	339	66	66	66	60	64	71	72	72	69	57	68	68	67	37	42
A2_8	Comprehensive, evidence-based guidelines on prevention or chronic illness treatment																				
10 to 12	Guide creation of individual-level patient reports to use during visits	17.4	35.3	34.4	34.6	33.2	19.7	28.8	31.8	34.5	20.8	16.9	27.8	33.3	22.3	36.5	19.1	32.4	42.6	33.8	28.4

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
7 to 9	Available and integrated into care protocols and/or reminders	59.4	58.9	59.1	49.5	57.7	68.2	66.7	57.6	40.6	70.6	71.8	65.3	63.9	70.7	52.8	58.8	64.7	52.9	42.9	51.3
4 to 6	Available, but do not influence care	17.0	5.0	5.0	12.2	8.0	7.6	3.0	7.6	13.8	6.1	11.3	5.6	2.8	3.8	8.5	19.1	2.9	1.5	12.3	20.4
1 to 3	Not readily available	6.2	0.8	1.5	3.7	1.1	4.5	1.5	3.0	11.1	2.6	0.0	1.4	0.0	3.2	2.2	2.9	0.0	2.9	11.0	0.0
	N	483	484	482	350	338	66	66	66	61	64	71	72	72	68	58	68	68	68	37	42
A2_9	Visits																				
10 to 12	Organized to address both acute and planned care needs; use tailored guideline-based information in team huddles to ensure patient needs met at each encounter	24.0	42.4	48.1	39.3	48.7	27.3	40.9	37.9	31.4	26.1	26.4	48.6	52.8	24.7	30.9	27.9	52.9	52.9	53.9	56.3
7 to 9	Organized to address both acute and planned care needs if time permits; use subpopulation reports to proactively call in patient groups for planned care visits	39.5	43.4	43.2	34.5	35.0	30.3	43.9	40.9	31.0	40.5	41.7	37.5	41.7	36.2	42.0	39.7	35.3	42.6	19.3	29.4
4 to 6	Organized around acute problems; attention to ongoing illness and prevention needs if time permits	36.0	14.1	8.7	24.1	16.0	40.9	15.2	21.2	37.6	31.3	31.9	12.5	5.6	34.8	27.1	32.4	11.8	4.4	18.1	14.3
1 to 3	Largely focus on patient's acute problems	0.6	0.2	0.0	2.1	0.3	1.5	0.0	0.0	0.0	2.1	0.0	1.4	0.0	4.3	0.0	0.0	0.0	0.0	8.7	0.0
	N	484	484	482	352	340	66	66	66	61	64	72	72	72	68	58	68	68	68	37	42
A2_10	Reminders to providers																				
10 to 12	Include general notification of existence of chronic illness and specific information about guideline adherence at the time of individual patient encounters	31.6	46.7	52.8	45.2	46.8	39.4	47.0	60.6	39.5	33.6	29.2	31.0	37.5	35.4	36.6	30.9	44.1	66.2	49.7	45.8
7 to 9	Include general notification of existence of chronic illness and needed services for populations of patients through periodic reporting	36.4	39.2	36.4	31.9	36.5	27.3	24.2	27.3	19.2	33.1	41.7	53.5	45.8	33.9	41.4	26.5	50.0	25.0	31.7	38.0
4 to 6	Include general notification of existence of chronic illness but do not describe needed services at time of encounter	22.7	13.1	8.7	15.5	11.1	27.3	28.8	7.6	19.6	23.3	16.7	12.7	15.3	19.8	15.2	33.8	5.9	7.4	16.3	3.5

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
1 to 3	Not available	9.4	1.0	2.1	7.4	5.7	6.1	0.0	4.5	21.6	10.0	12.5	2.8	1.4	10.9	6.8	8.8	0.0	1.5	2.3	12.7
	N	481	482	481	350	337	66	66	66	60	63	72	71	72	69	58	68	68	68	37	42
A2_11	Nonphysician practice team members																				
10 to 12	Perform key clinical service roles matching abilities and credentials	42.6	66.7	73.0	59.3	61.5	48.5	68.2	69.7	57.5	72.6	51.4	80.6	69.4	59.1	58.1	30.9	58.8	69.1	46.0	58.5
7 to 9	Provide some clinical services such as assessment or self-management support	29.5	23.2	22.4	17.2	19.0	33.3	25.8	21.2	20.1	6.4	23.6	15.3	25.0	12.4	7.3	35.3	30.9	26.5	22.4	29.3
4 to 6	Primarily manage patient flow and triage	22.5	8.3	3.5	18.4	14.6	15.2	4.5	7.6	18.7	9.2	15.3	2.8	2.8	26.5	31.8	26.5	10.3	4.4	27.2	11.4
1 to 3	Play limited role in providing clinical care	5.4	1.9	1.0	5.0	4.9	3.0	1.5	1.5	3.7	11.8	9.7	1.4	2.8	2.0	2.7	7.4	0.0	0.0	4.4	0.9
	N	484	483	482	350	338	66	66	66	61	64	72	72	72	69	57	68	68	68	37	42
A2_12	Medication reconciliation																				
10 to 12	Done regularly for all patients; documented in patient's medical record	74.0	80.4	89.6	70.7	80.8	74.2	83.3	87.9	72.6	58.5	76.4	81.9	90.3	73.7	82.2	77.9	94.1	94.1	78.8	97.9
7 to 9	Done regularly for patients during care transitions; documented in patient's medical record	20.2	17.1	9.8	24.5	13.7	22.7	12.1	10.6	16.2	30.5	22.2	16.7	8.3	22.0	11.8	20.6	5.9	5.9	12.3	2.1
4 to 6	Done intermittently	5.8	2.5	0.6	4.8	5.5	3.0	4.5	1.5	11.2	11.0	1.4	1.4	1.4	3.8	6.1	1.5	0.0	0.0	8.9	0.0
1 to 3	Not done	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	N	484	484	482	352	338	66	66	66	61	64	72	72	72	69	58	68	68	68	37	42
Risk-stratified care management																					
A2_16	A standard method or tools to stratify patients by risk level																				
10 to 12	Available, consistently used, and integrated into all aspects of care delivery	5.2	59.3	74.8	31.3	37.1	6.1	72.7	78.8	21.9	27.2	1.4	42.9	76.4	9.2	25.0	7.4	67.2	67.6	35.0	37.8
7 to 9	Available and consistently used, but inconsistently integrated into all aspects of care delivery	9.5	34.9	21.7	23.6	23.9	10.6	24.2	13.6	15.1	19.5	12.5	51.4	22.2	28.3	25.5	8.8	28.4	30.9	22.2	34.7
4 to 6	Available, but not consistently used	32.2	5.2	3.1	22.6	25.3	31.8	1.5	4.5	28.8	28.5	30.6	4.3	1.4	30.3	27.3	30.9	3.0	1.5	26.7	16.3
1 to 3	Not available	53.1	0.6	0.4	22.5	13.7	51.5	1.5	3.0	34.2	24.8	55.6	1.4	0.0	32.1	22.1	52.9	1.5	0.0	16.2	11.2
	N	484	479	480	349	338	66	66	66	60	64	72	70	72	67	58	68	67	68	36	42

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_17[a]	Clinical care management services for high-risk patients																				
10 to 12	Systematically provided by care managers who are practice team members	19.1	87.9	88.3	35.8	50.8	7.7	86.2	81.5	37.1	55.5	23.6	95.8	80.6	32.2	48.2	16.2	79.4	85.1	42.0	44.1
7 to 9	Provided by external care managers who regularly communicate with care team	12.7	10.2	7.3	24.8	16.5	18.5	12.3	7.7	11.8	6.0	5.6	2.8	13.9	18.2	16.4	17.6	17.6	11.9	21.9	26.1
4 to 6	Provided by external care managers with limited connection to the practice	23.9	1.2	3.3	17.4	16.2	15.4	1.5	7.7	25.0	21.4	27.8	0.0	4.2	22.8	18.7	25.0	0.0	1.5	23.8	7.6
1 to 3	Not available	44.4	0.6	1.0	21.9	16.4	58.5	0.0	3.1	26.0	17.1	43.1	1.4	1.4	26.8	16.8	41.2	2.9	1.5	12.2	22.3
	N	482	481	479	415	335	65	65	65	79	64	72	71	72	73	57	68	68	67	46	39
A2_18	Registry or panel-level data																				
10 to 12	Regularly available to assess and manage care for practice populations across a comprehensive set of diseases and risk states	9.3	40.9	42.7	32.1	40.3	16.7	50.0	53.0	29.9	19.8	11.1	45.8	29.2	32.6	26.2	8.8	25.0	38.2	18.5	25.4
7 to 9	Regularly available to assess and manage care for practice populations for a limited number of diseases and risk states	31.5	43.6	47.5	29.8	29.3	18.2	39.4	34.8	19.0	44.1	43.1	43.1	66.7	20.8	41.6	30.9	61.8	51.5	46.6	22.0
4 to 6	Available on ad hoc basis to assess and manage care for practice populations	30.4	13.2	7.9	16.5	16.1	33.3	6.1	6.1	19.2	13.9	27.8	11.1	4.2	19.1	13.8	30.9	7.4	10.3	18.6	43.0
1 to 3	Not available to assess or manage care for practice populations	28.8	2.3	1.9	21.6	14.3	31.8	4.5	6.1	31.9	22.2	18.1	0.0	0.0	27.5	18.4	29.4	5.9	0.0	16.3	9.5
	N	483	484	482	348	335	66	66	66	58	64	72	72	72	69	57	68	68	68	37	39
Patient and caregiver engagement																					
A2_19[a]	Assessing patient and family values and preferences																				
10 to 12	Done systematically and incorporated in planning and organizing care	15.1	28.0	34.7	35.3	31.8	21.2	22.7	31.8	34.8	28.2	11.1	31.9	15.3	31.5	22.0	19.1	25.0	32.4	41.3	28.7
7 to 9	Done and incorporated on ad hoc basis in planning and organizing care	46.9	54.2	52.6	43.4	46.3	47.0	57.6	51.5	43.8	38.7	45.8	52.8	63.9	49.1	50.0	50.0	50.0	54.4	42.0	44.4
4 to 6	Done but not used in planning and organizing care	21.3	14.7	10.2	12.2	14.1	18.2	16.7	13.6	15.6	16.7	15.3	9.7	16.7	14.1	20.1	13.2	22.1	11.8	7.3	16.1

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
1 to 3	Not done	16.7	3.1	2.5	9.1	7.8	13.6	3.0	3.0	5.7	16.4	27.8	5.6	4.2	5.3	7.9	17.6	2.9	1.5	9.4	10.8
	N	484	483	481	415	338	66	66	66	81	64	72	72	72	75	58	68	68	68	46	42
A2_20	Involving patients in decision-making and care																				
10 to 12	Systematically supported by practice teams trained in decision making techniques	15.1	26.9	34.9	30.8	40.1	15.2	19.7	35.4	20.9	25.3	18.1	36.1	19.4	21.5	20.7	7.4	26.5	45.6	33.7	35.8
7 to 9	Supported and documented by practice teams	30.6	48.3	53.5	35.9	36.3	30.3	51.5	40.0	35.2	44.2	27.8	45.8	59.7	48.5	53.4	42.6	51.5	44.1	48.5	36.3
4 to 6	Done through provision of patient-education materials or class referrals	51.7	24.6	11.6	32.7	22.6	53.0	27.3	24.6	42.7	27.8	52.8	18.1	20.8	29.5	21.2	44.1	22.1	10.3	17.8	27.9
1 to 3	Not a priority	2.7	0.2	0.0	0.6	1.0	1.5	1.5	0.0	1.2	2.7	1.4	0.0	0.0	0.5	4.6	5.9	0.0	0.0	0.0	0.0
	N	484	480	482	351	338	66	66	65	61	64	72	72	72	68	58	68	68	68	37	40
A2_21	Patient comprehension of verbal and written materials																				
10 to 12	Assessed; accomplished by translational services or multilingual staff, and training staff in health literacy and communication techniques assuring that patients know how to manage conditions at home	10.5	22.7	24.8	23.4	33.3	13.6	16.9	21.2	22.7	17.0	5.6	23.9	9.9	9.6	20.4	5.9	19.1	20.6	45.7	36.2
7 to 9	Assessed; accomplished by translational services or multilingual staff, and assuring materials and communications are at a level and language patients understand	32.0	44.1	45.5	29.5	33.3	21.2	33.8	31.8	23.9	25.9	40.3	39.4	50.7	21.6	44.9	36.8	45.6	55.9	22.1	38.3
4 to 6	Assessed; accomplished by assuring materials are at a level and language patients understand	43.4	28.1	26.7	39.8	31.5	53.0	41.5	45.5	41.7	52.9	40.3	31.0	35.2	58.4	27.2	51.5	30.9	22.1	31.1	25.4
1 to 3	Not assessed	14.1	5.2	2.9	7.3	1.8	12.1	7.7	1.5	11.7	4.2	13.9	5.6	4.2	10.3	7.4	5.9	4.4	1.5	1.1	0.0
	N	484	481	483	352	339	66	65	66	61	64	72	71	71	69	58	68	68	68	37	41
A2_22	Self-management support																				
10 to 12	Provided by practice team members trained in patient empowerment and problem-solving methodologies	10.1	22.2	35.6	13.3	18.1	7.6	16.7	27.3	20.5	12.4	8.3	25.0	47.2	14.2	6.9	4.4	13.4	29.4	12.7	25.4

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
7 to 9	Provided by goal setting and action planning with practice team members	25.4	56.4	51.1	44.0	44.5	24.2	65.2	43.9	36.7	52.1	30.6	54.2	44.4	39.5	59.1	25.0	52.2	52.9	51.7	28.9
4 to 6	Accomplished by referral to self-management classes or educators	45.0	11.8	8.9	25.3	22.6	53.0	9.1	18.2	33.8	32.5	34.7	16.7	4.2	30.8	16.8	50.0	22.4	17.6	13.5	10.4
1 to 3	Limited to distribution of information (for example, pamphlets, booklets)	19.4	9.5	4.3	17.5	14.7	15.2	9.1	10.6	9.0	3.0	26.4	4.2	4.2	15.5	17.2	20.6	11.9	0.0	22.1	35.3
	N	484	482	483	350	335	66	66	66	60	64	72	72	72	69	58	68	67	68	37	42
A2_23	Test results and care plans																				
10 to 12	Systematically communicated to patients in ways that are convenient to patients	39.1	57.3	69.0	64.3	63.0	39.4	47.0	63.6	57.9	51.3	34.7	56.9	76.4	57.0	61.9	26.5	55.2	75.0	74.8	70.6
7 to 9	Systematically communicated to patients in way that is convenient to practice	50.1	34.6	27.5	26.7	31.3	56.1	33.3	27.3	39.6	46.2	58.3	40.3	19.4	30.9	29.5	67.6	34.3	25.0	15.6	28.3
4 to 6	Communicated to patients on ad hoc basis	10.4	7.1	3.5	9.0	5.6	4.5	19.7	9.1	2.5	1.7	6.9	1.4	4.2	12.0	8.5	5.9	4.5	0.0	9.6	1.1
1 to 3	Not communicated to patients	0.4	1.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.9	0.0	1.4	0.0	0.0	0.0	0.0	6.0	0.0	0.0	0.0
	N	483	480	484	352	338	66	66	66	61	64	72	72	72	68	58	68	67	68	37	41
A2_24	Feedback to the practice from patient and family caregiver council																				
10 to 12	Consistently used to guide practice improvements and measure system performance and practice-level care interactions	16.0	25.8	35.8	30.9	29.1	18.5	31.8	34.8	20.3	13.1	14.1	35.2	44.4	39.0	37.2	5.9	25.4	30.9	42.1	17.1
7 to 9	Regularly collected; incorporated into practice improvements on ad hoc basis	19.8	29.1	28.1	17.0	26.4	13.8	16.7	19.7	17.3	31.6	7.0	53.5	41.7	5.6	12.5	20.6	32.8	27.9	10.4	32.6
4 to 6	Collected on ad hoc basis; not regularly incorporated into practice improvements	32.2	8.2	8.7	29.8	26.3	33.8	9.1	7.6	44.5	37.9	43.7	1.4	4.2	36.7	31.5	35.3	4.5	2.9	24.4	34.0
1 to 3	Not collected	32.0	36.9	27.4	22.3	18.2	33.8	42.4	37.9	17.9	17.5	35.2	9.9	9.7	18.6	18.8	38.2	37.3	38.2	23.1	16.3
	N	481	477	481	349	335	65	66	66	60	64	71	71	72	69	58	68	67	68	36	40

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
Coordination of care across the medical neighborhood																					
A2_14	Tracking of patient referrals to specialists																				
10 to 12	Consistently done for all patients	33.3	46.6	55.9	56.5	63.8	45.5	50.0	59.1	47.3	63.9	30.6	54.2	48.6	38.3	53.6	23.5	29.4	47.1	58.5	37.8
7 to 9	Consistently done for high-risk patients	32.7	33.7	28.8	27.0	23.3	25.8	28.8	21.2	29.5	15.4	38.9	27.8	29.2	42.9	15.7	35.3	47.1	33.8	15.1	38.5
4 to 6	Sometimes done	26.3	17.6	14.1	13.9	12.3	24.2	18.2	18.2	22.7	18.7	19.4	18.1	22.2	14.4	30.2	27.9	20.6	17.6	24.8	23.6
1 to 3	Generally not done	7.7	2.1	1.2	2.6	0.7	4.5	3.0	1.5	0.6	2.1	11.1	0.0	0.0	4.3	0.4	13.2	2.9	1.5	1.6	0.0
	N	483	483	483	352	337	66	66	66	61	64	72	72	72	69	58	68	68	68	37	42
A2_15[a]	Care plans																				
10 to 12	Developed collaboratively with patients and families; include self-management and clinical goals, are routinely recorded and used to guide subsequent care	16.0	39.3	42.2	38.5	41.2	16.7	25.8	27.3	33.2	39.1	18.1	31.9	56.9	28.2	37.2	17.6	35.3	44.1	50.8	29.7
7 to 9	Developed collaboratively with patients and families; include self-management and clinical goals, but not routinely recorded or used to guide subsequent care	35.1	45.0	47.0	32.2	34.2	31.8	51.5	48.5	27.4	38.9	30.6	52.8	36.1	41.9	31.6	42.6	44.1	47.1	26.6	40.2
4 to 6	Developed and recorded, but only reflect providers' priorities	32.6	10.5	8.1	18.4	17.3	28.8	13.6	16.7	30.9	12.0	43.1	8.3	6.9	19.8	22.3	23.5	16.2	7.4	15.8	30.1
1 to 3	Not routinely developed or recorded	16.4	5.2	2.7	10.9	7.3	22.7	9.1	7.6	8.5	10.0	8.3	6.9	0.0	10.1	8.8	16.2	4.4	1.5	6.9	0.0
	N	482	484	483	418	337	66	66	66	80	63	72	72	72	75	58	68	68	68	46	42
A2_26	Referral relationships with medical and surgical specialists																				
10 to 12	Formalized with referral protocols or practice agreements with most or all medical and surgical specialist groups	16.4	18.8	24.2	34.7	39.8	24.2	13.6	19.7	24.8	29.3	19.4	13.9	35.2	30.7	19.7	16.2	14.7	23.5	28.2	36.9
7 to 9	Formalized with referral protocols or practice agreements with many medical and surgical specialist groups	53.8	21.9	21.7	19.1	27.9	54.5	13.6	22.7	10.4	37.3	52.8	33.3	18.3	10.3	29.9	51.5	20.6	30.9	14.6	11.0

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Formalized with referral protocols or practice agreements with a few medical and surgical specialist groups	19.3	24.6	24.0	12.8	11.7	12.1	9.1	25.8	20.6	12.6	15.3	26.4	31.0	11.4	16.4	17.6	23.5	25.0	25.6	10.7
1 to 3	Not formalized with referral protocols or practice agreements	10.4	34.7	30.0	33.4	20.6	9.1	63.6	31.8	44.2	20.8	12.5	26.4	15.5	47.6	34.0	14.7	41.2	20.6	31.6	41.4
	N	481	484	483	350	339	66	66	66	61	64	72	72	71	69	58	68	68	68	37	41
A2_27	Behavioral health (mental health and chemical dependency) services																				
10 to 12	Readily available from behavioral health specialists who are on-site members of the care team or work in an organization with which practice has a referral protocol or agreement	7.1	20.1	24.8	11.0	15.9	1.5	7.6	18.2	5.1	17.0	13.9	39.4	56.9	2.2	3.3	4.5	19.1	19.1	10.2	6.5
7 to 9	Available from behavioral health specialists; generally timely and convenient	33.4	28.6	32.2	42.2	34.6	39.4	51.5	34.8	43.3	31.1	25.0	28.2	22.2	40.9	54.9	38.8	30.9	32.4	38.0	20.2
4 to 6	Available from behavioral health specialists but not timely or convenient	41.9	35.6	34.9	37.5	28.6	47.0	25.8	37.9	44.1	40.3	37.5	25.4	18.1	49.6	20.3	40.3	39.7	39.7	45.6	38.7
1 to 3	Difficult to obtain reliably	17.6	15.7	8.1	9.3	20.8	12.1	15.2	9.1	7.5	11.6	23.6	7.0	2.8	7.4	21.4	16.4	10.3	8.8	6.3	34.6
	N	482	483	484	348	338	66	66	66	60	64	72	71	72	68	58	67	68	68	36	41
A2_28	Patients in need of specialty care, hospital care, or supportive community-based resources																				
10 to 12	Obtain needed referrals to partners with whom practice has relationship; relevant information is communicated in advance; timely follow-up after the visit	34.9	48.1	50.5	54.1	60.9	50.0	63.6	60.6	45.6	56.8	29.2	59.2	62.5	32.2	64.7	30.9	50.0	52.2	50.1	50.9
7 to 9	Obtain needed referrals to partners with whom practice has relationship; relevant information is communicated in advance	50.8	43.8	44.7	29.9	33.1	40.9	27.3	33.3	32.0	39.1	50.0	36.6	34.7	48.5	22.0	51.5	41.2	38.8	28.5	45.4

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Obtain needed referrals to partners with whom practice has relationship	12.6	7.9	3.5	11.4	3.9	9.1	9.1	4.5	11.9	3.3	20.8	2.8	1.4	15.3	7.1	14.7	8.8	7.5	21.4	3.1
1 to 3	Cannot reliably obtain needed referrals to partners with whom practice has a relationship	1.7	0.2	1.2	4.6	2.2	0.0	0.0	1.5	10.6	0.8	0.0	1.4	1.4	4.0	6.2	2.9	0.0	1.5	0.0	0.5
	N	484	482	483	351	339	66	66	66	60	64	72	71	72	69	58	68	68	67	37	42
A2_29[a]	Follow-up by the primary care practice with patients seen in ER or hospital																				
10 to 12	Done routinely because practice has arrangements in place with ER and hospital to track patients and ensure follow-up is completed within a few days	25.8	64.4	76.7	52.0	58.2	22.7	75.4	72.3	44.9	53.0	20.8	61.1	70.8	39.5	45.2	36.8	64.7	77.9	54.1	67.5
7 to 9	Occurs because practice makes proactive efforts to identify patients	19.0	27.3	17.0	25.0	17.9	16.7	13.8	21.5	18.5	15.9	20.8	37.5	13.9	25.0	21.4	20.6	25.0	11.8	30.8	13.4
4 to 6	Occurs only if ER or hospital alerts practice	50.4	6.6	5.6	21.3	23.1	57.6	9.2	6.2	36.6	28.9	54.2	1.4	15.3	30.4	32.3	36.8	7.4	8.8	15.1	19.1
1 to 3	Generally does not occur, because information is not available to primary care team	4.8	1.7	0.6	1.7	0.7	3.0	1.5	0.0	0.0	2.2	4.2	0.0	0.0	5.1	1.1	5.9	2.9	1.5	0.0	0.0
	N	484	483	481	414	338	66	65	65	79	64	72	72	72	75	58	68	68	68	45	40
A2_30	Linking patients to supportive community-based resources																				
10 to 12	Done through active coordination between health system, community service agencies, and patients; accomplished by designated staff person	7.0	29.9	34.0	25.3	24.1	6.1	42.4	22.7	9.2	18.8	6.9	38.9	25.0	19.1	11.3	1.5	25.4	41.2	35.5	32.7
7 to 9	Done through designated staff person or resource responsible for connecting patients with community resources	23.4	44.8	49.4	25.6	35.5	28.8	28.8	47.0	27.2	36.8	13.9	41.7	58.3	15.9	33.4	29.4	34.3	41.2	19.6	28.4
4 to 6	Limited to providing patients with list of identified community resources in an accessible format	55.3	22.0	13.1	38.1	33.0	51.5	24.2	19.7	47.9	27.3	70.8	16.7	11.1	46.4	43.6	54.4	34.3	17.6	29.1	38.9

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
1 to 3	Not done systematically	14.3	3.3	3.5	11.0	7.5	13.6	4.5	10.6	15.6	17.1	8.3	2.8	5.6	18.7	11.8	14.7	6.0	0.0	15.8	0.0
	N	483	478	482	350	338	66	66	66	60	64	72	72	72	69	57	68	67	68	37	41
A2_31	When this practice refers patients to other providers, transmission of patient information to other providers																				
10 to 12	Consistently done and always contains complete set of clinical information	37.2	60.5	65.5	65.4	70.1	48.5	81.8	78.8	79.4	87.9	47.2	73.6	68.1	59.4	74.0	20.6	39.7	52.9	44.8	54.6
7 to 9	Usually done but does not always contain complete set of clinical information	46.5	32.2	29.3	27.8	24.6	42.4	13.6	16.7	19.4	9.8	38.9	23.6	29.2	30.4	19.3	52.9	42.6	35.3	33.4	39.2
4 to 6	Sometimes done but does not always contain complete set of clinical information	14.9	6.6	4.3	6.5	4.6	9.1	1.5	4.5	0.0	2.3	12.5	2.8	2.8	9.7	2.0	20.6	17.6	7.4	21.9	6.2
1 to 3	Not done consistently	1.4	0.6	0.8	0.4	0.6	0.0	3.0	0.0	1.2	0.0	1.4	0.0	0.0	0.6	4.6	5.9	0.0	4.4	0.0	0.0
	N	484	484	484	352	339	66	66	66	61	64	72	72	72	69	58	68	68	68	37	42
A2_32	Receipt of information about our patients from hospitals and emergency departments in my community																				
10 to 12	Consistently occurs within 24 hours after event	13.4	35.3	51.3	27.6	37.9	6.1	27.3	43.9	17.7	12.9	22.2	31.0	51.4	26.1	39.4	11.8	35.3	32.4	17.7	46.4
7 to 9	Usually occurs within 72 hours after event	45.9	50.2	38.7	53.5	44.7	47.0	53.0	43.9	65.0	59.6	48.6	64.8	41.7	56.7	43.7	39.7	44.1	51.5	73.3	36.8
4 to 6	Usually occurs but is often one week or more after event	24.0	9.5	5.2	13.3	12.7	28.8	12.1	12.1	14.5	17.1	19.4	1.4	2.8	12.0	8.3	32.4	10.3	5.9	6.0	14.3
1 to 3	Does not occur consistently	16.7	5.0	4.8	5.6	4.7	18.2	7.6	0.0	2.8	10.4	9.7	2.8	4.2	5.3	8.7	16.2	10.3	10.3	3.0	2.5
	N	484	482	483	351	338	66	66	66	61	64	72	71	72	69	58	68	68	68	37	42
A2_34	My practice knows the total cost to payers of medical care																				
10 to 12	For all patients	2.1	5.0	6.2	8.4	7.4	3.0	3.0	3.1	9.8	8.9	1.4	2.8	4.2	1.2	1.4	0.0	2.9	4.4	0.0	1.4
7 to 9	For most patients	4.8	17.6	28.6	19.4	21.5	6.1	13.6	32.3	16.0	15.6	8.3	25.4	47.2	23.0	34.8	2.9	27.9	17.6	25.1	15.6
4 to 6	For some patients	26.5	51.8	49.4	34.9	38.2	24.2	56.1	41.5	31.6	57.6	22.2	59.2	40.3	39.3	22.2	39.7	39.7	60.3	33.6	44.8
1 to 3	For no patients	66.7	25.7	15.8	37.3	32.9	66.7	27.3	23.1	42.6	17.9	68.1	12.7	8.3	36.5	41.6	57.4	29.4	17.6	41.3	38.2
	N	483	483	482	352	336	66	66	65	61	64	72	71	72	69	58	68	68	68	37	41

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
Continuous improvement driven by data																					
A2_35[a]	QI activities																				
10 to 12	Based on proven improvement strategy; used continuously in meeting organizational goals	23.4	46.5	50.1	41.3	45.1	19.7	50.0	37.9	25.6	28.7	30.6	47.9	70.4	36.7	35.3	14.9	50.0	54.4	60.8	33.0
7 to 9	Based on proven improvement strategy in reaction to specific problems	24.4	37.6	33.0	31.9	31.1	25.8	28.8	36.4	26.0	30.5	25.0	47.9	21.1	34.0	43.1	19.4	27.9	23.5	23.3	37.1
4 to 6	Conducted on ad hoc basis in reaction to specific problems	42.2	13.9	14.2	23.1	17.7	40.9	18.2	21.2	40.9	19.8	29.2	4.2	8.5	25.0	15.6	46.3	20.6	22.1	13.1	27.0
1 to 3	Not organized or supported consistently	9.9	2.1	2.7	3.7	6.1	13.6	3.0	4.5	7.5	21.0	15.3	0.0	0.0	4.3	6.0	19.4	1.5	0.0	2.8	2.9
	N	483	482	479	415	336	66	66	66	79	64	72	71	71	74	58	67	68	68	46	42
A2_36	QI activities are conducted by																				
10 to 12	Practice teams supported by QI infrastructure with meaningful involvement of patients and families	5.4	19.2	20.7	25.7	25.1	3.3	18.5	16.7	23.3	15.5	7.2	23.9	26.8	17.3	13.4	5.7	10.3	13.2	30.7	9.4
7 to 9	All practice teams supported by QI infrastructure	28.8	49.8	47.3	25.9	35.7	30.0	49.2	51.5	15.8	24.8	29.0	50.7	59.2	37.6	34.2	24.5	52.9	50.0	14.2	62.7
4 to 6	Topic-specific QI committees	23.4	14.6	16.4	20.7	12.4	20.0	13.8	10.6	5.0	17.5	26.1	16.9	9.9	15.4	15.5	11.3	16.2	16.2	31.3	5.9
1 to 3	Centralized committee or department	42.3	16.3	15.6	27.6	26.8	46.7	18.5	21.2	55.9	42.1	37.7	8.5	4.2	29.7	36.9	58.5	20.6	20.6	23.8	22.0
	N	444	478	482	350	339	60	65	66	60	64	69	71	71	69	58	53	68	68	37	42
A2_37	Performance measures																				
10 to 12	Comprehensive and available for practice and individual providers, and fed back to individual providers	36.4	64.8	75.4	49.7	52.6	21.2	61.5	62.1	28.5	28.6	50.0	63.9	81.9	52.5	52.5	16.2	64.7	75.0	49.9	38.0
7 to 9	Comprehensive and available for practice but not individual providers	9.3	16.8	14.3	13.5	20.1	10.6	15.4	19.7	19.7	26.3	9.7	20.8	6.9	9.1	21.6	17.6	20.6	14.7	10.1	27.8
4 to 6	Available for practice but limited in scope	39.7	16.8	9.7	23.8	20.2	57.6	20.0	15.2	30.7	22.9	34.7	13.9	9.7	26.5	19.4	41.2	11.8	10.3	25.9	32.3
1 to 3	Not available for practice	14.7	1.7	0.6	13.0	7.1	10.6	3.1	3.0	21.1	22.1	5.6	1.4	1.4	12.0	6.5	25.0	2.9	0.0	14.1	1.9
	N	484	483	484	348	334	66	65	66	60	61	72	72	72	69	57	68	68	68	36	41

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_38	Reports of patient care experiences (for example, CAHPS survey) and care processes or outcomes																				
10 to 12	Routinely provided as feedback to practice teams; transparently reported externally to patients, other teams, and external agencies	11.2	33.2	36.2	22.5	28.2	3.0	21.2	31.8	15.1	26.4	4.2	25.4	29.2	32.1	15.5	0.0	27.9	37.3	12.7	20.1
7 to 9	Routinely provided as feedback to practice teams; reported externally but with team identities masked	8.1	20.1	29.3	16.5	17.0	13.6	19.7	25.8	11.1	1.9	9.7	8.5	37.5	7.5	28.2	11.8	32.4	31.3	24.2	8.0
4 to 6	Routinely provided as feedback to practice teams but not reported externally	34.2	41.7	29.3	21.9	28.7	24.2	53.0	34.8	16.6	35.5	36.1	63.4	29.2	30.3	36.5	27.9	39.7	25.4	18.3	55.1
1 to 3	Not routinely available to practice teams	46.6	5.0	5.2	39.2	26.1	59.1	6.1	7.6	57.2	36.1	50.0	2.8	4.2	30.1	19.9	60.3	0.0	6.0	44.8	16.8
	N	483	482	481	342	330	66	66	66	58	62	72	71	72	69	54	68	68	67	35	40
A2_39	Staff, resources, and time for QI activities																				
10 to 12	Fully available in the practice	5.0	17.8	21.3	19.9	24.3	3.0	19.7	9.1	10.7	13.6	6.9	19.7	31.9	11.2	24.2	5.9	23.9	22.1	13.4	9.5
7 to 9	Generally available, usually at the necessary level	24.2	38.6	46.9	32.0	34.7	27.3	40.9	51.5	27.8	47.7	29.2	52.1	31.9	32.9	24.0	17.6	32.8	41.2	48.8	46.8
4 to 6	Occasionally available, but limited in scope	51.9	41.9	28.9	34.1	29.9	53.0	36.4	33.3	46.2	13.5	44.4	26.8	34.7	37.1	38.1	55.9	41.8	36.8	33.9	40.2
1 to 3	Not readily available in the practice	19.0	1.7	2.9	14.1	11.1	16.7	3.0	6.1	15.3	25.2	19.4	1.4	1.4	18.8	13.6	20.6	1.5	0.0	3.9	3.5
	N	484	482	484	343	331	66	66	66	59	63	72	71	72	69	56	68	67	68	36	40
A2_40	Organization's hiring and training processes																				
10 to 12	Support and sustain improvements in care through training and incentives focused on rewarding patient-centered care	10.5	21.5	23.7	22.6	32.4	18.2	19.7	27.7	27.6	18.7	9.7	19.7	26.8	11.2	26.6	11.8	20.9	23.5	19.8	18.6
7 to 9	Place a priority on the ability of new and existing staff to improve care and create a patient-centered culture	35.7	42.5	51.8	44.1	40.4	34.8	42.4	50.8	50.1	55.6	44.4	40.8	46.5	53.3	41.3	36.8	46.3	47.1	44.7	52.5

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Reflect how potential hires will affect the culture and participate in QI activities	26.9	24.6	18.9	13.3	16.2	22.7	28.8	20.0	3.7	16.0	27.8	19.7	16.9	9.1	14.8	22.1	23.9	22.1	15.2	25.1
1 to 3	Focus only on narrowly defined functions and requirements of each position	26.9	11.5	5.6	20.1	11.1	24.2	9.1	1.5	18.5	9.6	18.1	19.7	9.9	26.4	17.2	29.4	9.0	7.4	20.2	3.7
	N	484	480	481	342	334	66	66	65	59	63	72	71	71	67	57	68	67	68	36	39
A2_41	Responsibility for conducting quality improvement activities																				
10 to 12	Shared by all staff	14.9	36.6	41.3	30.8	39.3	18.2	34.8	38.5	28.5	42.4	11.1	47.2	47.1	28.8	37.0	13.4	36.8	41.2	40.1	20.8
7 to 9	Assigned to an identified quality improvement group that receives dedicated resources	27.7	41.2	32.7	23.9	32.0	18.2	45.5	35.4	10.3	14.6	52.8	33.3	28.6	22.6	15.1	16.4	38.2	23.5	28.1	54.2
4 to 6	Assigned to a group without committed resources	26.5	15.5	20.4	21.4	13.2	25.8	9.1	13.8	11.3	4.1	20.8	18.1	21.4	24.7	32.0	22.4	11.8	26.5	25.0	4.1
1 to 3	Not assigned to any specific group	30.8	6.6	5.6	23.9	15.5	37.9	10.6	12.3	50.0	38.8	15.3	1.4	2.9	24.0	15.9	47.8	13.2	8.8	6.8	20.9
	N	483	483	480	341	331	66	66	65	59	60	72	72	70	68	56	67	68	68	34	41
Questions not included in M-PCMH-A scales[b]																					
A2_5	Scheduled phone visits or group visits with the physician, PA, NP, or nurse																				
10 to 12	Generally available; patients are regularly asked about their preferences for phone or group visits	n.a.	8.5	7.3	5.5	7.3	n.a.	6.2	9.1	3.8	5.4	n.a.	0.0	6.9	0.5	2.8	n.a.	1.5	7.6	2.9	3.4
7 to 9	Generally available at a patient's request	n.a.	13.7	18.9	11.6	14.0	n.a.	16.9	13.6	16.1	11.7	n.a.	12.5	13.9	2.6	9.2	n.a.	10.3	10.6	13.5	2.5
4 to 6	Available on a limited basis for practice patients	n.a.	19.5	20.8	16.0	17.8	n.a.	23.1	24.2	3.5	39.3	n.a.	12.5	22.2	21.9	19.8	n.a.	23.5	21.2	4.8	8.5
1 to 3	Not regularly available to practice patients	n.a.	58.2	53.0	66.9	60.9	n.a.	53.8	53.0	76.5	43.5	n.a.	75.0	56.9	75.0	68.3	n.a.	64.7	60.6	78.8	85.6
	N	n.a.	481	481	352	340	n.a.	65	66	61	64	n.a.	72	72	69	58	n.a.	68	66	37	42
A2_13	Notification of patients of their laboratory and radiology results																				
10 to 12	Consistently done for abnormal and normal results	74.8	79.7	79.2	86.1	86.5	66.7	72.7	80.3	93.5	90.3	90.3	97.2	77.5	89.0	94.2	79.4	79.4	79.4	89.5	84.0
7 to 9	Consistently done for abnormal results; sporadically done for normal results	24.4	20.1	20.2	13.9	13.5	28.8	27.3	18.2	6.5	9.7	9.7	2.8	22.5	11.0	5.8	20.6	20.6	20.6	10.5	16.0

Table A.4a. (*continued*)

Question		CPC-wide					AR					CO					NJ				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Sometimes done	0.6	0.2	0.6	0.0	0.0	4.5	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 to 3	Not generally done	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	484	483	480	352	337	66	66	66	61	64	72	72	71	69	58	68	68	68	37	41
A2_25	Shared decision making aids used to help patients and providers jointly decide on treatment options																				
10 to 12	Consistently provided to patients for two or more clinical conditions; provision is tracked with run charts or other measures	n.a.	41.3	55.0	22.0	28.0	n.a.	30.3	50.0	22.7	11.8	n.a.	79.2	54.2	7.9	12.2	n.a.	48.5	51.5	23.1	29.0
7 to 9	Consistently provided to patients for two or more clinical conditions; provision is not formally tracked	n.a.	22.3	30.6	23.9	25.0	n.a.	40.9	28.8	30.7	29.1	n.a.	9.7	20.8	19.7	26.0	n.a.	30.9	39.7	14.5	21.5
4 to 6	Sometimes provided to patients for one or more clinical conditions	n.a.	34.3	13.2	41.0	38.2	n.a.	27.3	16.7	32.9	45.0	n.a.	11.1	22.2	53.5	40.9	n.a.	19.1	8.8	47.4	47.2
1 to 3	Not provided to patients	n.a.	2.1	1.2	13.2	8.9	n.a.	1.5	4.5	13.7	14.2	n.a.	0.0	2.8	18.9	20.8	n.a.	1.5	0.0	15.0	2.3
	N	n.a.	484	484	352	337	n.a.	66	66	60	64	n.a.	72	72	69	58	n.a.	68	68	37	41
A2_33	Timely receipt of information about our patients after they visit specialists in my community																				
10 to 12	Occurs for all patients	n.a.	11.0	14.7	16.1	23.1	n.a.	10.6	12.1	12.5	14.5	n.a.	4.2	23.6	2.9	11.1	n.a.	7.4	7.4	23.2	6.0
7 to 9	Occurs for most patients	n.a.	64.8	67.4	66.9	63.2	n.a.	54.5	65.2	53.6	70.1	n.a.	76.4	63.9	71.8	71.2	n.a.	67.6	63.2	64.8	75.1
4 to 6	Occurs for some patients	n.a.	21.5	16.7	13.9	11.1	n.a.	28.8	19.7	33.0	10.8	n.a.	15.3	11.1	20.5	6.0	n.a.	25.0	27.9	9.9	18.3
1 to 3	Does not occur consistently for patients	n.a.	2.7	1.2	3.1	2.5	n.a.	6.1	3.0	0.9	4.6	n.a.	4.2	1.4	4.8	11.7	n.a.	0.0	1.5	2.1	0.6
	N	n.a.	483	484	352	337	n.a.	66	66	61	64	n.a.	72	72	69	57	n.a.	68	68	37	41

Sources: CPC practice surveys administered to CPC practices October through December 2012, and to CPC and comparison practices April through July 2014, and April through August 2015.

Note: Question number pertain to the 2015 CPC practice survey.

[a] The 2014 sample size for comparison responses is larger than the sample sizes for the other questions, because these six questions were asked on the short form version of 2014 practice survey administered to comparison practices. The short form version was not administered to comparison practices in 2015.

[b] Four questions are not included in the composite scores for the seven M-PCMH-A domains, because three questions were not asked in the first survey round (A2_5, A2_25, A2_33), and one question (A2_13) was determined to be not statistically related to any function of primary care delivery in our Factor Analysis.

n.a. = not applicable because the question was not asked in the given survey round; M-PCMH-A = Patient-Centered Medical Home Assessment modified for the CPC evaluation; PA = physician assistant; NP = nurse practitioner; ER = emergency room; EHR = electronic health record; QI = quality improvement; CAHPS = Consumer Assessment of Healthcare Providers and Systems.

Table A.4b. Distributions of CPC and comparison practice responses to M-PCMH-A questions in 2012, 2014, and 2015, by region (NY, OH/KY, OK, OR) (percentage of practices)

		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
Question		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
M-PCMH-A scales (scale: 1 [least advanced approach]–12 [best approach])																					
A2_1-2	Continuity of care																				
10 to 12	High	56.8	71.6	64.9	61.5	48.7	64.0	61.3	53.3	66.5	60.8	50.8	57.1	87.3	53.0	44.2	37.9	78.8	69.7	59.7	64.6
7 to 9	Medium high	33.8	25.7	31.1	26.9	47.1	29.3	36.0	45.3	23.3	29.3	38.1	39.7	12.7	30.8	30.5	54.5	21.2	27.3	29.1	32.9
4 to 6	Medium low	8.1	2.7	4.1	0.9	0.5	5.3	2.7	1.3	6.9	8.8	9.5	3.2	0.0	5.4	23.5	6.1	0.0	3.0	4.5	0.9
1 to 3	Low	1.4	0.0	0.0	10.7	3.7	1.3	0.0	0.0	3.3	1.2	1.6	0.0	0.0	10.9	1.8	1.5	0.0	0.0	6.7	1.5
	N	74	74	74	33	36	75	75	75	65	55	63	63	63	39	41	66	66	66	48	43
A2_3, 4, 6	Access to care																				
10 to 12	High	12.2	52.7	64.9	42.7	51.2	10.7	62.7	66.7	61.5	73.8	1.6	57.1	42.9	20.4	53.5	4.5	60.6	71.2	38.3	63.1
7 to 9	Medium high	39.2	37.8	23.0	31.5	30.7	57.3	37.3	30.7	31.2	20.5	9.5	25.4	44.4	32.1	28.4	65.2	30.3	27.3	43.8	30.1
4 to 6	Medium low	48.6	8.1	12.2	25.9	18.1	32.0	0.0	2.7	6.4	5.3	74.6	12.7	11.1	38.6	13.0	30.3	9.1	1.5	17.1	5.3
1 to 3	Low	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.4	14.3	4.8	1.6	8.9	5.1	0.0	0.0	0.0	0.8	1.5
	N	74	74	74	44	36	75	75	75	72	55	63	63	63	48	42	66	66	66	55	43
A2_7-12	Planned care for chronic conditions and preventive care																				
10 to 12	High	12.2	14.9	25.7	47.3	34.7	2.7	42.7	44.0	37.2	58.5	3.2	36.5	29.0	24.8	15.1	1.5	27.3	45.5	22.7	43.3
7 to 9	Medium high	39.2	64.9	59.5	39.2	46.4	77.3	57.3	56.0	59.8	38.1	30.2	47.6	69.4	52.1	74.8	72.7	66.7	53.0	58.0	50.0
4 to 6	Medium low	48.6	20.3	14.9	13.5	18.9	20.0	0.0	0.0	3.0	3.3	65.1	15.9	1.6	22.0	9.4	24.2	6.1	1.5	19.3	6.7
1 to 3	Low	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	1.0	0.7	1.5	0.0	0.0	0.0	0.0
	N	74	74	74	34	36	75	75	75	65	55	63	63	62	39	42	66	66	66	48	43
A2_16-18	Risk-stratified care management																				
10 to 12	High	4.1	27.0	62.2	24.0	24.3	0.0	54.7	78.7	21.3	38.9	1.6	60.3	66.1	32.5	28.6	0.0	36.4	57.6	16.5	31.2
7 to 9	Medium high	9.5	60.8	35.1	54.5	28.9	29.3	45.3	21.3	42.7	40.3	11.1	39.7	30.6	19.0	25.9	28.8	59.1	36.4	45.2	43.5
4 to 6	Medium low	40.5	12.2	2.7	17.0	39.7	37.3	0.0	0.0	27.0	15.3	19.0	0.0	3.2	29.1	25.1	42.4	4.5	6.1	11.5	20.1
1 to 3	Low	45.9	0.0	0.0	4.4	7.2	33.3	0.0	0.0	9.0	5.5	68.3	0.0	0.0	19.4	20.4	28.8	0.0	0.0	26.8	5.2
	N	74	74	74	44	36	75	75	75	71	55	63	63	62	48	42	66	66	66	55	43
A2_19-24	Patient and caregiver engagement																				
10 to 12	High	9.5	9.5	14.9	25.1	21.3	0.0	16.0	12.0	17.8	30.1	3.2	14.3	14.3	22.9	21.1	1.5	4.5	13.6	7.5	16.7
7 to 9	Medium high	28.4	50.0	71.6	45.7	43.3	52.0	70.7	86.7	70.0	56.7	19.0	61.9	69.8	25.0	35.2	48.5	66.7	77.3	52.2	56.1
4 to 6	Medium low	60.8	40.5	13.5	28.8	35.4	41.3	13.3	1.3	10.1	8.8	65.1	15.9	15.9	51.4	42.4	45.5	28.8	9.1	39.2	27.2
1 to 3	Low	1.4	0.0	0.0	0.5	0.0	6.7	0.0	0.0	2.1	4.3	12.7	7.9	0.0	0.8	1.4	4.5	0.0	0.0	1.1	0.0
	N	74	74	74	44	36	75	75	75	70	55	63	63	63	48	42	66	66	66	55	43

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_14-15, 26-32, 34	Coordination of care across the medical neighborhood																				
10 to 12	High	6.8	6.8	16.2	28.5	20.4	4.0	12.0	13.3	15.6	22.4	3.2	9.5	17.5	13.2	15.1	0.0	6.1	13.6	8.5	16.4
7 to 9	Medium high	32.4	50.0	75.7	56.0	65.0	30.7	72.0	84.0	72.9	66.9	28.6	65.1	65.1	47.3	53.7	56.1	80.3	78.8	61.3	76.9
4 to 6	Medium low	55.4	41.9	8.1	15.5	14.7	62.7	16.0	2.7	10.9	10.7	58.7	25.4	15.9	39.5	30.5	43.9	13.6	7.6	30.2	6.6
1 to 3	Low	5.4	1.4	0.0	0.0	0.0	2.7	0.0	0.0	0.6	0.0	9.5	0.0	1.6	0.0	0.7	0.0	0.0	0.0	0.0	0.0
	N	74	74	74	44	36	75	75	75	71	55	63	63	63	48	42	66	66	66	55	43
A2_35-41	Continuous improvement driven by data																				
10 to 12	High	8.1	8.1	16.2	19.9	6.8	1.3	24.0	25.3	26.8	51.2	3.2	9.5	17.5	12.4	15.5	0.0	12.1	25.8	8.5	24.1
7 to 9	Medium high	13.5	43.2	47.3	37.8	43.4	48.0	60.0	68.0	46.0	33.8	11.1	61.9	68.3	35.3	53.8	39.4	63.6	54.5	44.7	48.7
4 to 6	Medium low	59.5	41.9	33.8	11.3	37.4	38.7	16.0	6.7	23.6	12.7	33.3	25.4	14.3	39.7	24.8	53.0	22.7	15.2	39.7	24.0
1 to 3	Low	18.9	6.8	2.7	31.0	12.5	12.0	0.0	0.0	3.6	2.3	52.4	3.2	0.0	12.7	5.9	7.6	1.5	4.5	7.0	3.3
	N	74	74	74	44	36	75	75	75	70	55	63	63	63	48	41	66	66	66	55	43
	Overall M-PCMH-A score																				
10 to 12	High	8.1	8.1	14.9	19.3	17.9	0.0	24.0	22.7	24.8	38.8	3.2	15.9	16.1	22.9	15.0	1.5	9.1	22.7	7.6	15.4
7 to 9	Medium high	16.2	75.7	78.4	54.8	63.3	54.7	76.0	77.3	63.6	52.0	14.3	69.8	77.4	34.4	63.2	47.0	87.9	72.7	64.5	75.7
4 to 6	Medium low	74.3	16.2	6.8	26.0	18.8	44.0	0.0	0.0	11.6	9.2	73.0	14.3	6.5	39.9	20.3	50.0	3.0	4.5	27.9	8.2
1 to 3	Low	1.4	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	9.5	0.0	0.0	2.8	1.5	1.5	0.0	0.0	0.0	0.7
	N	74	74	74	33	36	75	75	75	64	55	63	63	62	39	41	66	66	66	48	43
Continuity of care																					
A2_1	Patient assignment to providers																				
10 to 12	Assigned to panels; panel assignments routinely used for scheduling and monitored to balance supply and demand	54.1	57.5	70.3	60.8	49.9	34.7	48.0	46.7	61.6	65.7	38.1	55.6	92.1	54.3	42.1	41.5	80.3	78.8	58.6	67.6
7 to 9	Assigned to panels; panel assignments routinely used by practice for scheduling	39.2	38.4	27.0	20.1	45.6	60.0	46.7	52.0	30.1	21.4	46.0	39.7	7.9	27.2	47.1	53.8	19.7	18.2	30.8	29.2
4 to 6	Assigned to panels; panel assignments not routinely used by practice	5.4	4.1	2.7	2.7	0.8	5.3	5.3	0.0	2.8	0.6	9.5	4.8	0.0	15.6	9.7	3.1	0.0	3.0	1.6	1.7
1 to 3	Not assigned to panels	1.4	0.0	0.0	16.4	3.7	0.0	0.0	1.3	5.5	12.2	6.3	0.0	0.0	2.9	1.1	1.5	0.0	0.0	9.1	1.5
	N	74	73	74	32	36	75	75	75	62	54	63	63	63	38	41	65	66	66	48	43

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_2	Patients are encouraged to see their paneled provider and practice team																				
10 to 12	By practice team; priority in scheduling appointments and patients usually see their own provider/practice team	70.3	83.8	75.7	79.1	65.8	77.3	68.9	76.0	77.1	70.6	71.4	74.6	88.9	80.2	52.2	53.0	81.8	75.8	68.4	90.5
7 to 9	By practice team; priority in scheduling appointments, but patients commonly see other providers	21.6	13.5	21.6	9.3	30.1	16.0	29.7	24.0	19.5	19.4	27.0	22.2	11.1	7.9	22.5	39.4	18.2	24.2	22.0	8.0
4 to 6	By practice team; not a priority in scheduling appointments	6.8	1.4	2.7	0.9	0.0	5.3	1.4	0.0	0.0	8.0	0.0	1.6	0.0	1.1	0.0	4.5	0.0	0.0	2.3	0.0
1 to 3	Only at patient's request	1.4	1.4	0.0	10.7	4.1	1.3	0.0	0.0	3.3	1.9	1.6	1.6	0.0	10.9	25.3	3.0	0.0	0.0	7.2	1.5
	N	74	74	74	33	36	75	74	75	65	55	63	63	63	39	41	66	66	66	48	43
Access to care																					
A2_3	Appointment systems																				
10 to 12	Flexible and accommodate customized visit lengths, same-day visits, scheduled follow-up, and multiple provider visits	81.1	78.1	77.0	78.6	63.9	69.3	82.7	74.7	78.1	89.9	55.6	73.0	54.0	53.9	35.1	72.7	82.8	83.3	91.4	78.6
7 to 9	Flexible and include capacity for same-day visits	18.9	21.9	20.3	20.0	34.0	30.7	16.0	25.3	21.1	6.0	38.1	25.4	41.3	27.8	61.0	27.3	15.6	16.7	5.7	16.6
4 to 6	Provide some flexibility in scheduling different visit lengths	0.0	0.0	1.4	1.4	0.5	0.0	1.3	0.0	0.8	4.1	4.8	1.6	4.8	13.5	2.1	0.0	0.0	0.0	2.5	4.0
1 to 3	Limited to single office-visit type	0.0	0.0	1.4	0.0	1.6	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	4.8	1.8	0.0	1.6	0.0	0.5	0.7
	N	74	73	74	33	35	75	75	75	65	55	63	63	63	39	42	66	64	66	48	43
A2_4	Communication with the practice team through email, text messaging, or patient portal																				
10 to 12	Generally available; patients are regularly asked about their communication preferences	5.6	60.8	73.0	60.7	65.4	12.0	86.5	85.3	69.2	84.6	1.6	58.7	74.2	42.7	57.6	7.6	71.2	83.3	55.7	69.6
7 to 9	Generally available at a patient's request	16.9	8.1	10.8	10.8	11.0	13.3	8.1	10.7	13.4	9.1	1.6	17.5	6.5	15.2	29.1	21.2	21.2	15.2	16.9	23.6

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Available on limited basis for practice patients	18.3	18.9	4.1	11.9	6.3	25.3	5.4	2.7	10.6	0.6	12.7	4.8	6.5	4.9	5.3	42.4	0.0	0.0	3.4	1.1
1 to 3	Not regularly available to practice patients	59.2	12.2	12.2	16.7	17.3	49.3	0.0	1.3	6.9	5.7	84.1	19.0	12.9	37.2	8.1	28.8	7.6	1.5	24.0	5.7
	N	71	74	74	34	36	75	74	75	65	55	63	63	62	39	42	66	66	66	48	43
A2_6[a]	After-hours access to a physician, PA/NP, or nurse																				
10 to 12	Available via email or phone or in person	28.4	45.9	56.8	32.7	36.2	24.3	68.0	65.3	62.3	65.2	22.2	63.5	53.2	29.3	24.7	31.8	60.6	65.2	32.2	48.1
7 to 9	Available from coverage arrangement; shares necessary patient data with and provides summary to practice	54.1	48.6	39.2	56.5	51.0	66.2	29.3	33.3	27.5	27.0	50.8	25.4	41.9	27.1	60.7	62.1	37.9	34.8	48.2	47.6
4 to 6	Available from coverage arrangement; no standard communication protocol for urgent problems	17.6	2.7	2.7	8.0	10.2	9.5	2.7	1.3	8.3	3.0	17.5	4.8	3.2	26.5	1.6	6.1	1.5	0.0	18.1	3.6
1 to 3	Not available or limited to an answering machine	0.0	2.7	1.4	2.8	2.6	0.0	0.0	0.0	1.9	4.8	9.5	6.3	1.6	17.1	12.9	0.0	0.0	0.0	1.5	0.7
	N	74	74	74	43	36	74	75	75	72	54	63	63	62	48	41	66	66	66	55	43
Planned care for chronic conditions and preventive care																					
A2_7	Registries–either integrated in the EHR or free-standing–on individual patients																				
10 to 12	Available and routinely used across comprehensive set of diseases and risk states	13.5	28.4	31.9	57.9	37.4	9.3	38.7	48.0	55.9	74.6	4.8	52.4	53.2	37.0	21.2	3.0	46.2	53.8	40.0	56.7
7 to 9	Available and routinely used, but only for a limited number of diseases and risk states	20.3	35.1	36.1	22.8	29.1	18.7	54.7	50.7	13.2	15.6	24.2	28.6	32.3	21.0	21.6	43.9	29.2	35.4	23.4	33.1
4 to 6	Available but not routinely used	37.8	29.7	23.6	17.1	26.6	18.7	4.0	1.3	20.4	7.7	37.1	7.9	8.1	21.4	29.7	34.8	18.5	9.2	35.3	7.0
1 to 3	Not available	28.4	6.8	8.3	2.2	6.8	53.3	2.7	0.0	10.5	2.1	33.9	11.1	6.5	20.6	27.5	18.2	6.2	1.5	1.3	3.3
	N	74	74	72	34	36	75	75	75	65	55	62	63	62	39	42	66	65	65	48	43
A2_8	Comprehensive, evidence-based guidelines on prevention or chronic illness treatment																				
10 to 12	Guide creation of individual-level patient reports to use during visits	10.8	29.7	21.9	36.5	35.1	30.7	38.7	38.7	51.8	60.8	6.3	52.4	29.0	30.8	16.1	16.7	39.4	43.9	32.0	28.0

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
7 to 9	Available and integrated into care protocols and/or reminders	52.7	55.4	64.4	41.3	52.6	49.3	61.3	58.7	40.7	34.3	44.4	41.3	64.5	57.7	77.8	71.2	56.1	51.5	50.9	70.2
4 to 6	Available, but do not influence care	27.0	14.9	13.7	22.2	11.2	2.7	0.0	0.0	7.6	4.9	44.4	4.8	4.8	9.7	5.3	9.1	3.0	4.5	16.1	0.7
1 to 3	Not readily available	9.5	0.0	0.0	0.0	1.2	17.3	0.0	2.7	0.0	0.0	4.8	1.6	1.6	1.8	0.8	3.0	1.5	0.0	1.0	1.1
	N	74	74	73	33	35	75	75	75	64	55	63	63	62	39	41	66	66	66	48	43
A2_9	Visits																				
10 to 12	Organized to address both acute and planned care needs; use tailored guideline-based information in team huddles to ensure outstanding patient needs met at each encounter	24.3	41.9	44.6	48.6	45.6	29.3	37.3	54.1	60.3	74.2	15.9	42.9	41.9	29.7	37.4	15.2	31.8	51.5	24.3	66.5
7 to 9	Organized to address both acute and planned care needs if time permits; use subpopulation reports to proactively call in patient groups for planned care visits	27.0	29.7	41.9	19.3	39.8	53.3	58.7	40.5	34.2	21.6	30.2	44.4	53.2	39.9	45.3	53.0	54.5	42.4	61.3	27.6
4 to 6	Organized around acute problems; attention to ongoing illness and prevention needs if time permits	48.6	28.4	13.5	31.2	14.6	17.3	4.0	5.4	4.8	4.2	54.0	12.7	4.8	29.6	17.3	28.8	13.6	6.1	14.4	5.8
1 to 3	Largely focus on patient's acute problems	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.8	0.0	3.0	0.0	0.0	0.0	0.0
	N	74	74	74	34	36	75	75	74	65	55	63	63	62	39	42	66	66	66	48	43
A2_10	Reminders to providers																				
10 to 12	Include general notification of existence of chronic illness and specific information about guideline adherence at the time of individual patient encounters	20.5	36.5	40.5	44.4	40.1	37.3	80.0	60.3	43.9	61.7	14.3	44.4	43.5	48.3	45.8	50.0	41.5	62.1	55.7	61.5
7 to 9	Include general notification of existence of chronic illness and needed services for populations of patients through periodic reporting	45.2	41.9	41.9	39.5	40.3	48.0	20.0	37.0	43.6	29.8	41.3	34.9	51.6	27.6	40.0	21.9	50.8	25.8	24.1	33.3

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Include general notification of existence of chronic illness but do not describe needed services at time of encounter	17.8	18.9	13.5	14.8	19.2	9.3	0.0	2.7	8.9	6.4	36.5	19.0	1.6	17.3	7.0	20.3	7.7	12.1	12.6	3.2
1 to 3	Not available	16.4	2.7	4.1	1.3	0.5	5.3	0.0	0.0	3.5	2.1	7.9	1.6	3.2	6.7	7.2	7.8	0.0	0.0	7.6	1.9
	N	73	74	74	34	36	75	75	73	63	55	63	63	62	39	42	64	65	66	48	41
A2_11	Nonphysician practice team members																				
10 to 12	Perform key clinical service roles matching abilities and credentials	37.8	48.6	59.5	74.7	42.2	48.0	57.3	75.7	68.1	69.6	27.0	71.0	90.3	39.2	51.2	53.0	84.8	80.3	65.2	78.5
7 to 9	Provide some clinical services such as assessment or self-management support	32.4	21.6	33.8	4.4	29.5	37.3	37.3	24.3	15.7	20.4	14.3	19.4	8.1	21.8	23.3	28.8	10.6	15.2	27.0	16.0
4 to 6	Primarily manage patient flow and triage	24.3	23.0	5.4	15.4	18.0	12.0	5.3	0.0	11.4	8.5	54.0	6.5	0.0	24.7	20.2	13.6	4.5	4.5	6.8	3.4
1 to 3	Play limited role in providing clinical care	5.4	6.8	1.4	5.5	10.2	2.7	0.0	0.0	4.8	1.6	4.8	3.2	1.6	14.4	5.3	4.5	0.0	0.0	1.0	2.1
	N	74	74	74	33	35	75	75	74	64	55	63	62	62	39	42	66	66	66	47	43
A2_12	Medication reconciliation																				
10 to 12	Done regularly for all patients; documented in patient's medical record	68.9	64.9	81.1	55.8	76.3	81.3	73.3	86.5	83.9	89.6	69.8	92.1	96.8	62.8	74.1	68.2	75.8	92.4	69.0	87.3
7 to 9	Done regularly for patients during care transitions; documented in patient's medical record	20.3	25.7	18.9	44.2	5.4	14.7	26.7	13.5	10.7	9.7	20.6	7.9	1.6	35.1	24.5	21.2	22.7	7.6	26.9	12.0
4 to 6	Done intermittently	10.8	9.5	0.0	0.0	18.3	4.0	0.0	0.0	5.4	0.8	9.5	0.0	1.6	2.1	1.4	10.6	1.5	0.0	4.1	0.8
1 to 3	Not done	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	74	74	74	34	36	75	75	74	64	54	63	63	62	39	42	66	66	66	48	42
Risk-stratified care management																					
A2_16	A standard method or tools to stratify patients by risk level																				
10 to 12	Available, consistently used, and integrated into all aspects of care delivery	9.5	70.3	82.2	51.5	35.5	5.3	56.2	89.2	38.2	51.6	6.3	69.8	82.0	34.3	43.9	0.0	36.4	45.5	26.3	33.8
7 to 9	Available and consistently used, but inconsistently integrated into all aspects of care delivery	9.5	27.0	12.3	25.8	1.1	6.7	38.4	9.5	31.9	26.1	4.8	28.6	16.4	14.2	14.8	13.6	45.5	48.5	24.5	50.6

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Available, but not consistently used	31.1	2.7	5.5	5.7	47.5	45.3	5.5	1.4	19.2	20.2	20.6	1.6	1.6	30.2	29.9	33.3	18.2	6.1	21.4	4.6
1 to 3	Not available	50.0	0.0	0.0	17.0	15.8	42.7	0.0	0.0	10.7	2.1	68.3	0.0	0.0	21.3	11.5	53.0	0.0	0.0	27.8	11.0
	N	74	74	73	34	36	75	73	74	65	53	63	63	61	39	42	66	66	66	48	43
A2_17[a]	Clinical care management services for high-risk patients																				
10 to 12	Systematically provided by care managers who are practice team members	6.8	75.3	87.8	37.3	57.6	26.7	96.0	98.6	30.7	50.5	6.3	93.7	95.1	26.6	42.1	45.5	89.4	89.4	43.8	58.4
7 to 9	Provided by external care managers who regularly communicate with care team	19.2	19.2	9.5	34.8	10.2	10.7	2.7	1.4	27.6	32.8	9.5	6.3	1.6	29.9	4.3	7.6	10.6	4.5	26.7	18.2
4 to 6	Provided by external care managers with limited connection to the practice	30.1	5.5	2.7	9.7	11.3	28.0	1.3	0.0	20.4	8.8	9.5	0.0	1.6	18.9	27.6	28.8	0.0	6.1	4.9	19.0
1 to 3	Not available	43.8	0.0	0.0	18.3	21.0	34.7	0.0	0.0	21.3	8.0	74.6	0.0	1.6	24.6	26.0	18.2	0.0	0.0	24.7	4.4
	N	73	73	74	44	35	75	75	74	71	55	63	63	61	48	42	66	66	66	54	43
A2_18	Registry or panel-level data																				
10 to 12	Regularly available to assess and manage care for practice populations across a comprehensive set of diseases and risk states	5.5	17.6	38.4	34.9	42.3	10.7	56.0	54.7	48.8	64.9	7.9	39.7	33.9	35.5	39.1	4.5	53.0	51.5	21.9	56.7
7 to 9	Regularly available to assess and manage care for practice populations for a limited number of diseases and risk states	28.8	37.8	37.0	35.1	31.6	17.3	38.7	45.3	15.7	26.8	27.0	54.0	56.5	24.4	14.0	56.1	31.8	40.9	46.6	26.7
4 to 6	Available on ad hoc basis to assess and manage care for practice populations	21.9	40.5	23.3	10.5	10.2	44.0	5.3	0.0	18.0	1.0	20.6	6.3	4.8	6.6	24.6	33.3	13.6	6.1	24.0	12.4
1 to 3	Not available to assess or manage care for practice populations	43.8	4.1	1.4	19.6	15.9	28.0	0.0	0.0	17.5	7.3	44.4	0.0	4.8	33.5	22.3	6.1	1.5	1.5	7.5	4.2
	N	73	74	73	34	36	75	75	75	64	54	63	63	62	39	42	66	66	66	47	43
Patient and caregiver engagement																					
A2_19[a]	Assessing patient and family values and preferences																				
10 to 12	Done systematically and incorporated in planning and organizing care	16.2	21.6	31.5	49.4	36.3	17.3	31.1	46.6	28.7	38.8	9.5	47.6	52.4	38.6	31.7	10.6	16.7	34.8	22.7	34.4

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
7 to 9	Done and incorporated on ad hoc basis in planning and organizing care	45.9	59.5	54.8	41.2	48.7	33.3	60.8	46.6	46.5	41.5	42.9	33.3	39.7	19.3	47.8	65.2	63.6	56.1	57.4	54.0
4 to 6	Done but not used in planning and organizing care	25.7	16.2	12.3	7.7	8.1	36.0	5.4	5.5	12.8	15.3	25.4	15.9	4.8	23.3	14.1	13.6	18.2	6.1	6.8	8.5
1 to 3	Not done	12.2	2.7	1.4	1.8	7.0	13.3	2.7	1.4	11.9	4.4	22.2	3.2	3.2	18.8	6.4	10.6	1.5	3.0	13.1	3.0
	N	74	74	73	43	36	75	74	73	68	54	63	63	63	47	42	66	66	66	55	42
A2_20	Involving patients in decision-making and care																				
10 to 12	Systematically supported by practice teams trained in decision making techniques	16.2	25.0	31.1	42.3	49.0	25.3	28.8	37.3	39.6	53.3	11.1	27.0	44.4	29.3	50.4	10.6	24.2	32.3	25.3	40.1
7 to 9	Supported and documented by practice teams	24.3	37.5	62.2	28.4	28.1	32.0	60.3	62.7	35.2	36.7	22.2	46.0	47.6	22.2	9.8	34.8	45.5	55.4	34.1	50.2
4 to 6	Done through provision of patient-education materials or class referrals	58.1	37.5	6.8	28.4	23.0	40.0	11.0	0.0	25.2	10.0	61.9	27.0	7.9	47.8	39.8	53.0	30.3	12.3	39.5	9.7
1 to 3	Not a priority	1.4	0.0	0.0	1.0	0.0	2.7	0.0	0.0	0.0	0.0	4.8	0.0	0.0	0.8	0.0	1.5	0.0	0.0	1.1	0.0
	N	74	72	74	34	36	75	73	75	64	55	63	63	63	39	42	66	66	65	48	43
A2_21	Patient comprehension of verbal and written materials																				
10 to 12	Assessed; accomplished by translational services or multilingual staff, and training staff in health literacy and communication techniques assuring that patients know how to manage conditions at home	12.2	19.2	24.3	30.5	18.9	4.0	17.3	26.7	21.6	60.2	3.2	30.2	44.4	24.3	47.9	30.3	33.3	28.8	11.9	24.8
7 to 9	Assessed; accomplished by translational services or multilingual staff, and assuring materials and communications are at a level and language patients understand	23.0	41.1	41.9	20.9	45.5	40.0	66.7	58.7	40.9	19.6	19.0	30.2	25.4	38.1	7.6	42.4	48.5	51.5	38.9	58.4
4 to 6	Assessed; accomplished by assuring materials are at a level and language patients understand	48.6	30.1	32.4	33.2	34.6	42.7	12.0	14.7	36.7	19.6	50.8	39.7	20.6	34.7	44.5	16.7	13.6	16.7	41.4	16.8
1 to 3	Not assessed	16.2	9.6	1.4	15.4	1.0	13.3	4.0	0.0	0.8	0.6	27.0	0.0	9.5	3.0	0.0	10.6	4.5	3.0	7.8	0.0
	N	74	73	74	34	36	75	75	75	64	55	63	63	63	39	42	66	66	66	48	43

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_22	Self-management support																				
10 to 12	Provided by practice team members trained in patient empowerment and problem-solving methodologies	12.2	24.7	24.3	10.6	11.6	22.7	28.0	42.7	7.8	17.0	3.2	28.6	45.2	15.9	27.5	10.6	18.2	33.3	13.1	26.5
7 to 9	Provided by goal setting and action planning with practice team members	20.3	45.2	62.2	56.5	35.0	24.0	69.3	56.0	53.7	66.8	14.3	47.6	38.7	17.0	17.3	39.4	60.6	57.6	48.7	48.1
4 to 6	Accomplished by referral to self-management classes or educators	40.5	8.2	2.7	10.3	52.3	32.0	2.7	1.3	21.9	9.7	65.1	12.7	12.9	56.5	26.7	43.9	12.1	7.6	14.5	11.8
1 to 3	Limited to distribution of information (for example, pamphlets, booklets)	27.0	21.9	10.8	22.6	1.0	21.3	0.0	0.0	16.6	6.5	17.5	11.1	3.2	10.6	28.4	6.1	9.1	1.5	23.7	13.5
	N	74	73	74	33	33	75	75	75	64	55	63	63	62	39	41	66	66	66	48	42
A2_23	Test results and care plans																				
10 to 12	Systematically communicated to patients in ways that are convenient to patients	39.7	42.5	62.2	61.6	61.5	66.7	76.0	89.3	79.6	78.6	31.7	64.5	50.8	60.6	46.2	31.8	58.5	62.1	58.5	69.3
7 to 9	Systematically communicated to patients in way that is convenient to practice	39.7	53.4	32.4	27.9	36.1	24.0	22.7	10.7	16.1	15.7	54.0	22.6	44.4	28.1	42.0	54.5	33.8	36.4	29.5	23.9
4 to 6	Communicated to patients on ad hoc basis	19.2	4.1	5.4	10.5	2.4	9.3	1.3	0.0	4.4	5.7	12.7	12.9	4.8	11.3	11.8	13.6	7.7	1.5	11.9	6.7
1 to 3	Not communicated to patients	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	73	73	74	34	35	75	75	75	65	55	63	62	63	39	42	66	65	66	48	43
A2_24	Feedback to the practice from patient and family caregiver council																				
10 to 12	Consistently used to guide practice improvements and measure system performance and practice-level care interactions	12.3	18.9	28.8	21.7	28.2	38.7	27.4	34.7	26.6	48.7	9.5	22.6	26.2	45.5	25.1	10.6	18.8	50.0	22.9	28.5
7 to 9	Regularly collected; incorporated into practice improvements on ad hoc basis	17.8	41.9	35.6	28.2	24.7	29.3	12.3	26.7	31.0	18.0	28.6	22.6	13.1	9.2	39.7	21.2	21.9	28.8	14.1	27.3

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
4 to 6	Collected on ad hoc basis; not regularly incorporated into practice improvements	45.2	12.2	8.2	22.6	29.8	18.7	11.0	5.3	28.1	19.6	19.0	8.1	34.4	25.1	18.1	28.8	10.9	1.5	29.4	15.3
1 to 3	Not collected	24.7	27.0	27.4	27.6	17.3	13.3	49.3	33.3	14.2	13.7	42.9	46.8	26.2	20.2	17.1	39.4	48.4	19.7	33.6	29.0
	N	73	74	73	34	34	75	73	75	65	55	63	62	61	38	42	66	64	66	47	42
Coordination of care across the medical neighborhood																					
A2_14	Tracking of patient referrals to specialists																				
10 to 12	Consistently done for all patients	28.8	44.6	48.6	63.3	73.8	32.0	44.0	62.7	63.1	64.7	41.3	56.5	77.4	59.4	76.7	33.3	48.5	50.0	64.3	73.0
7 to 9	Consistently done for high-risk patients	37.0	39.2	37.8	23.8	23.8	26.7	41.3	32.0	29.1	28.5	27.0	14.5	8.1	20.8	15.6	37.9	34.8	36.4	26.1	24.9
4 to 6	Sometimes done	28.8	12.2	13.5	11.5	2.3	36.0	14.7	5.3	6.2	5.4	25.4	27.4	12.9	11.2	6.9	21.2	13.6	9.1	9.6	2.0
1 to 3	Generally not done	5.5	4.1	0.0	1.4	0.0	5.3	0.0	0.0	1.5	1.3	6.3	1.6	1.6	8.5	0.8	7.6	3.0	4.5	0.0	0.0
	N	73	74	74	34	36	75	75	75	65	54	63	62	62	39	40	66	66	66	47	43
A2_15[a]	Care plans																				
10 to 12	Developed collaboratively with patients and families; include self-management and clinical goals, are routinely recorded and used to guide subsequent care	19.2	47.3	32.4	55.0	63.2	13.5	45.3	54.7	38.5	57.2	12.7	57.1	45.2	35.3	21.6	13.6	31.8	33.3	25.8	34.3
7 to 9	Developed collaboratively with patients and families; include self-management and clinical goals, but not routinely recorded or used to guide subsequent care	20.5	32.4	51.4	21.0	19.7	51.4	44.0	45.3	30.8	32.1	34.9	36.5	37.1	31.2	27.9	33.3	54.5	63.6	46.9	53.0
4 to 6	Developed and recorded, but only reflect providers' priorities	31.5	10.8	14.9	14.3	14.3	27.0	8.0	0.0	17.9	4.5	39.7	4.8	8.1	16.5	37.4	34.8	12.1	3.0	15.2	2.4
1 to 3	Not routinely developed or recorded	28.8	9.5	1.4	9.7	2.7	8.1	2.7	0.0	12.7	6.2	12.7	1.6	9.7	17.0	13.1	18.2	1.5	0.0	12.0	10.3
	N	73	74	74	44	36	74	75	75	70	54	63	63	62	48	41	66	66	66	55	43
A2_26	Referral relationships with medical and surgical specialists																				
10 to 12	Formalized with referral protocols or practice agreements with most or all medical and surgical specialist groups	24.3	17.6	23.0	46.2	35.9	9.3	22.7	25.3	43.2	75.5	11.1	31.7	17.5	37.2	35.9	9.5	18.2	24.2	29.6	36.4

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
7 to 9	Formalized with referral protocols or practice agreements with many medical and surgical specialist groups	37.8	20.3	21.6	23.4	44.0	52.0	18.7	20.0	28.0	12.1	61.9	17.5	17.5	27.9	36.7	69.8	28.8	21.2	17.4	24.0
4 to 6	Formalized with referral protocols or practice agreements with a few medical and surgical specialist groups	24.3	24.3	25.7	0.7	11.3	30.7	40.0	16.0	12.9	10.3	17.5	20.6	12.7	3.0	11.7	15.9	25.8	31.8	18.5	9.5
1 to 3	Not formalized with referral protocols or practice agreements	13.5	37.8	29.7	29.6	8.9	8.0	18.7	38.7	15.9	2.1	9.5	30.2	52.4	32.0	15.7	4.8	27.3	22.7	34.5	30.1
	N	74	74	74	33	36	75	75	75	64	55	63	63	63	39	42	63	66	66	47	43
A2_27	Behavioral health (mental health and chemical dependency) services																				
10 to 12	Readily available from behavioral health specialists who are on-site members of the care team or work in an organization with which practice has a referral protocol or agreement	4.1	9.5	8.1	9.3	22.4	4.0	6.7	5.3	9.8	8.0	8.1	9.5	17.5	16.7	15.6	13.6	50.0	50.0	23.6	40.9
7 to 9	Available from behavioral health specialists; generally timely and convenient	36.5	21.6	44.6	48.0	13.4	34.7	18.7	16.0	36.4	43.3	30.6	28.6	54.0	56.6	52.6	28.8	22.7	24.2	32.5	22.3
4 to 6	Available from behavioral health specialists but not timely or convenient	44.6	45.9	35.1	24.3	25.8	40.0	45.3	69.3	44.1	33.6	37.1	46.0	20.6	21.7	28.8	47.0	19.7	19.7	34.9	12.0
1 to 3	Difficult to obtain reliably	14.9	23.0	12.2	18.4	38.4	21.3	29.3	9.3	9.8	15.1	24.2	15.9	7.9	5.0	3.0	10.6	7.6	6.1	9.0	24.8
	N	74	74	74	34	36	75	75	75	63	55	62	63	63	39	42	66	66	66	48	42
A2_28	Patients in need of specialty care, hospital care, or supportive community-based resources																				
10 to 12	Obtain needed referrals to partners with whom practice has relationship; relevant information is communicated in advance; timely follow-up after the visit	39.2	33.8	44.6	63.4	70.5	33.3	38.7	40.0	61.4	57.2	30.2	43.5	44.4	41.4	59.8	31.8	50.0	50.0	81.1	65.9

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
7 to 9	Obtain needed referrals to partners with whom practice has relationship; relevant information is communicated in advance	51.4	41.9	50.0	22.5	20.2	52.0	61.3	60.0	26.5	42.2	42.9	51.6	50.8	48.5	31.0	66.7	45.5	43.9	5.1	31.5
4 to 6	Obtain needed referrals to partners with whom practice has relationship	9.5	24.3	4.1	3.2	8.8	12.0	0.0	0.0	9.5	0.6	20.6	4.8	3.2	10.1	2.1	1.5	4.5	4.5	10.4	2.6
1 to 3	Cannot reliably obtain needed referrals to partners with whom practice has a relationship	0.0	0.0	1.4	11.0	0.5	2.7	0.0	0.0	2.7	0.0	6.3	0.0	1.6	0.0	7.1	0.0	0.0	1.5	3.3	0.0
	N	74	74	74	34	36	75	75	75	64	55	63	62	63	39	42	66	66	66	48	42
A2_29[a]	Follow-up by the primary care practice with patients seen in ER or hospital																				
10 to 12	Done routinely because practice has arrangements in place with ER and hospital to track patients and ensure follow-up is completed within a few days	29.7	59.5	75.7	82.6	67.6	21.3	62.7	87.8	56.8	64.3	15.9	58.7	69.4	27.3	49.0	33.3	69.7	81.8	49.1	60.4
7 to 9	Occurs because practice makes proactive efforts to identify patients	21.6	32.4	23.0	11.7	13.3	21.3	34.7	10.8	11.2	14.6	17.5	27.0	22.6	45.0	31.4	13.6	18.2	16.7	38.4	14.3
4 to 6	Occurs only if ER or hospital alerts practice	41.9	2.7	1.4	5.7	19.0	56.0	2.7	1.4	31.5	20.1	58.7	14.3	6.5	26.8	18.7	48.5	10.6	0.0	7.5	25.2
1 to 3	Generally does not occur, because information is not available to primary care team	6.8	5.4	0.0	0.0	0.0	1.3	0.0	0.0	0.5	1.1	7.9	0.0	1.6	0.9	0.8	4.5	1.5	1.5	5.0	0.0
	N	74	74	74	44	36	75	75	74	70	55	63	63	62	48	42	66	66	66	53	43
A2_30	Linking patients to supportive community-based resources																				
10 to 12	Done through active coordination between health system, community service agencies, and patients; accomplished by designated staff person	13.5	20.8	38.4	51.9	21.8	13.5	39.2	47.3	24.3	26.3	4.8	28.6	27.0	11.7	28.6	1.5	12.5	34.8	19.4	28.7

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
7 to 9	Done through designated staff person or resource responsible for connecting patients with community resources	13.5	34.7	43.8	18.8	45.6	13.5	59.5	48.6	29.4	44.4	20.6	47.6	50.8	32.7	14.7	47.0	67.2	56.1	37.0	44.1
4 to 6	Limited to providing patients with list of identified community resources in an accessible format	60.8	37.5	16.4	22.4	27.4	60.8	1.4	2.7	45.2	23.9	41.3	22.2	17.5	34.3	46.7	43.9	18.8	7.6	43.0	24.0
1 to 3	Not done systematically	12.2	6.9	1.4	6.8	5.1	12.2	0.0	1.4	1.1	5.4	33.3	1.6	4.8	21.2	10.0	7.6	1.6	1.5	0.6	3.3
	N	74	72	73	34	36	74	74	74	63	55	63	63	63	39	42	66	64	66	48	43
A2_31	When this practice refers patients to other providers, transmission of patient information to other providers																				
10 to 12	Consistently done and always contains complete set of clinical information	51.4	43.2	58.1	77.3	57.7	18.7	29.3	65.3	64.8	74.4	33.3	73.0	58.7	58.5	68.4	40.9	89.4	77.3	71.8	74.2
7 to 9	Usually done but does not always contain complete set of clinical information	28.4	47.3	33.8	21.0	32.1	68.0	57.3	32.0	25.5	25.2	46.0	25.4	36.5	38.9	21.7	48.5	10.6	21.2	26.8	24.9
4 to 6	Sometimes done but does not always contain complete set of clinical information	17.6	9.5	8.1	0.9	10.2	13.3	13.3	2.7	9.7	0.4	20.6	0.0	3.2	2.7	9.9	10.6	0.0	1.5	1.4	0.9
1 to 3	Not done consistently	2.7	0.0	0.0	0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	74	74	74	34	36	75	75	75	64	55	63	63	63	39	42	66	66	66	48	42
A2_32	Receipt of information about our patients from hospitals and emergency departments in my community																				
10 to 12	Consistently occurs within 24 hours after event	12.2	21.6	43.8	43.0	44.9	21.3	39.2	66.7	33.6	46.0	4.8	38.1	52.4	19.5	41.3	13.6	56.1	68.2	29.9	30.2
7 to 9	Usually occurs within 72 hours after event	55.4	54.1	38.4	46.8	49.6	45.3	59.5	33.3	44.7	45.3	36.5	41.3	31.7	45.4	36.7	47.0	31.8	30.3	47.4	40.9
4 to 6	Usually occurs but is often one week or more after event	21.6	21.6	12.3	4.6	4.9	29.3	1.4	0.0	18.2	6.4	27.0	15.9	1.6	16.1	13.4	9.1	4.5	1.5	22.1	28.9
1 to 3	Does not occur consistently	10.8	2.7	5.5	5.6	0.5	4.0	0.0	0.0	3.5	2.3	31.7	4.8	14.3	19.1	8.6	30.3	7.6	0.0	0.6	0.0
	N	74	74	73	34	36	75	74	75	64	55	63	63	63	39	42	66	66	66	47	41

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_34	My practice knows the total cost to payers of medical care																				
10 to 12	For all patients	5.5	5.4	13.7	20.3	15.0	1.3	5.3	2.7	3.3	8.2	1.6	7.9	9.5	19.1	12.7	1.5	7.6	6.1	4.4	2.1
7 to 9	For most patients	4.1	6.8	16.4	16.9	3.9	2.7	14.7	34.7	14.2	25.2	4.8	27.0	33.3	10.2	31.7	4.5	9.1	18.2	29.7	24.0
4 to 6	For some patients	24.7	56.8	53.4	21.3	33.4	21.3	57.3	42.7	48.6	37.3	15.9	36.5	46.0	32.8	13.6	37.9	54.5	62.1	37.5	64.6
1 to 3	For no patients	65.8	31.1	16.4	41.5	47.7	74.7	22.7	20.0	33.9	29.3	77.8	28.6	11.1	37.9	42.0	56.1	28.8	13.6	28.4	9.3
	N	73	74	73	34	36	75	75	75	64	55	63	63	63	39	41	66	66	66	48	41
Continuous improvement driven by data																					
A2_35[a]	QI activities																				
10 to 12	Based on proven improvement strategy; used continuously in meeting organizational goals	18.9	26.0	33.8	31.7	39.8	34.7	53.3	52.0	50.7	68.7	14.3	39.7	40.3	39.0	42.1	28.8	59.1	60.6	46.0	62.6
7 to 9	Based on proven improvement strategy in reaction to specific problems	18.9	37.0	35.2	40.3	16.0	40.0	42.7	48.0	31.9	19.7	14.3	49.2	43.5	37.9	49.9	25.8	28.8	22.7	27.7	22.2
4 to 6	Conducted on ad hoc basis in reaction to specific problems	59.5	31.5	21.1	26.3	34.1	22.7	4.0	0.0	13.7	9.5	57.1	9.5	14.5	15.7	6.4	42.4	9.1	13.6	26.3	15.2
1 to 3	Not organized or supported consistently	2.7	5.5	9.9	1.7	10.1	2.7	0.0	0.0	3.7	2.1	14.3	1.6	1.6	7.5	1.6	3.0	3.0	3.0	0.0	0.0
	N	74	73	71	44	34	75	75	75	69	54	63	63	62	48	41	66	66	66	55	43
A2_36	QI activities are conducted by																				
10 to 12	Practice teams supported by QI infrastructure with meaningful involvement of patients and families	10.3	14.1	12.2	26.2	23.6	2.7	20.0	20.3	34.8	53.9	5.2	20.6	22.2	31.1	27.9	3.2	27.7	34.8	17.7	23.5
7 to 9	All practice teams supported by QI infrastructure	14.7	33.8	48.6	27.9	18.6	41.1	56.0	44.6	34.6	21.6	17.2	57.1	30.2	16.6	29.4	42.9	49.2	45.5	29.2	66.9
4 to 6	Topic-specific QI committees	20.6	29.6	14.9	9.3	20.9	31.5	4.0	33.8	20.8	11.0	19.0	3.2	15.9	40.6	11.3	31.7	18.5	12.1	24.9	3.8
1 to 3	Centralized committee or department	54.4	22.5	24.3	36.6	36.9	24.7	20.0	1.4	9.8	13.5	58.6	19.0	31.7	11.8	31.4	22.2	4.6	7.6	28.2	5.9
	N	68	71	74	34	36	73	75	74	64	55	58	63	63	38	41	63	65	66	48	43

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_37	Performance measures																				
10 to 12	Comprehensive and available for practice and individual providers, and fed back to individual providers	28.4	35.1	55.4	48.8	53.6	54.7	82.7	93.3	67.5	74.3	23.8	69.8	74.6	41.8	42.3	57.6	77.3	84.8	53.9	73.5
7 to 9	Comprehensive and available for practice but not individual providers	2.7	20.3	32.4	3.1	11.7	2.7	14.7	5.3	16.1	14.6	11.1	15.9	12.7	19.4	27.2	12.1	9.1	7.6	19.9	13.7
4 to 6	Available for practice but limited in scope	50.0	43.2	12.2	26.9	26.5	36.0	2.7	1.3	14.2	7.9	28.6	14.3	12.7	28.8	25.7	28.8	10.6	7.6	15.1	8.5
1 to 3	Not available for practice	18.9	1.4	0.0	21.2	8.2	6.7	0.0	0.0	2.3	3.2	36.5	0.0	0.0	9.9	4.7	1.5	3.0	0.0	11.1	4.3
	N	74	74	74	33	36	75	75	75	63	55	63	63	63	39	41	66	66	66	48	43
A2_38	Reports of patient care experiences (for example, CAHPS survey) and care processes or outcomes																				
10 to 12	Routinely provided as feedback to practice teams; transparently reported externally to patients, other teams, and external agencies	13.5	27.4	32.9	37.0	16.3	27.0	73.3	50.7	31.1	53.0	4.8	27.0	36.5	10.7	39.1	24.2	25.8	33.8	11.3	19.3
7 to 9	Routinely provided as feedback to practice teams; reported externally but with team identities masked	6.8	15.1	23.3	11.9	6.9	1.4	2.7	25.3	23.3	21.6	4.8	31.7	28.6	24.3	30.3	9.1	34.8	33.8	15.3	21.1
4 to 6	Routinely provided as feedback to practice teams but not reported externally	37.8	43.8	42.5	13.0	31.2	40.5	24.0	24.0	19.4	13.2	34.9	36.5	27.0	18.7	8.0	36.4	31.8	21.5	35.2	28.7
1 to 3	Not routinely available to practice teams	41.9	13.7	1.4	38.1	45.6	31.1	0.0	0.0	26.1	12.2	55.6	4.8	7.9	46.2	22.6	30.3	7.6	10.8	38.2	31.0
	N	74	73	73	33	36	74	75	75	63	55	63	63	63	38	40	66	66	65	46	43
A2_39	Staff, resources, and time for QI activities																				
10 to 12	Fully available in the practice	9.5	10.8	18.9	21.7	16.5	4.0	21.3	18.7	29.8	46.2	4.8	20.6	34.9	29.7	36.4	0.0	9.1	13.6	21.2	16.1
7 to 9	Generally available, usually at the necessary level	17.6	25.7	32.4	18.9	32.8	44.0	29.3	69.3	36.9	30.2	12.7	50.8	52.4	29.2	26.2	18.2	40.9	50.0	31.6	38.0
4 to 6	Occasionally available, but limited in scope	52.7	60.8	41.9	41.2	31.9	38.7	49.3	12.0	16.0	21.7	46.0	27.0	11.1	24.6	23.0	74.2	48.5	31.8	40.9	44.9
1 to 3	Not readily available in the practice	20.3	2.7	6.8	18.2	18.8	13.3	0.0	0.0	17.3	1.8	36.5	1.6	1.6	16.5	14.3	7.6	1.5	4.5	6.2	0.9

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
	N	74	74	74	32	36	75	75	75	63	55	63	63	63	38	40	66	66	66	46	41
A2_40	Organization's hiring and training processes																				
10 to 12	Support and sustain improvements in care through training and incentives focused on rewarding patient-centered care	13.5	10.8	24.3	20.6	22.0	5.3	31.5	25.3	42.4	66.8	6.3	27.0	20.6	33.5	35.0	9.1	21.2	16.9	3.9	27.8
7 to 9	Place a priority on the ability of new and existing staff to improve care and create a patient-centered culture	48.6	36.5	54.1	34.8	35.4	37.3	45.2	52.0	44.0	24.7	14.3	38.1	58.7	39.3	41.4	30.3	48.5	53.8	44.1	38.5
4 to 6	Reflect how potential hires will affect the culture and participate in QI activities	31.1	45.9	16.2	13.5	21.3	14.7	19.2	21.3	7.9	3.1	25.4	9.5	7.9	10.9	8.8	45.5	22.7	27.7	31.6	29.7
1 to 3	Focus only on narrowly defined functions and requirements of each position	6.8	6.8	5.4	31.1	21.3	42.7	4.1	1.3	5.6	5.4	54.0	25.4	12.7	16.2	14.8	15.2	7.6	1.5	20.4	4.1
	N	74	74	74	33	36	75	73	75	64	55	63	63	63	37	41	66	66	65	46	43
A2_41	Responsibility for conducting quality improvement activities																				
10 to 12	Shared by all staff	13.5	20.3	31.5	30.0	22.5	14.7	41.3	37.3	42.2	64.3	12.7	40.3	49.2	34.8	51.5	21.2	36.4	45.5	12.2	28.9
7 to 9	Assigned to an identified quality improvement group that receives dedicated resources	18.9	44.6	37.0	21.3	45.3	46.7	49.3	36.0	28.1	22.9	9.5	35.5	39.7	29.3	24.8	27.3	40.9	28.8	26.8	49.5
4 to 6	Assigned to a group without committed resources	21.6	28.4	24.7	9.8	13.9	29.3	5.3	25.3	23.2	7.1	28.6	17.7	9.5	19.9	17.2	37.9	18.2	19.7	36.3	15.7
1 to 3	Not assigned to any specific group	45.9	6.8	6.8	38.9	18.3	9.3	4.0	1.3	6.5	5.7	49.2	6.5	1.6	16.0	6.6	13.6	4.5	6.1	24.7	6.0
	N	74	74	73	33	35	75	75	75	64	55	63	62	63	37	41	66	66	66	46	43
Questions not included in M-PCMH-A scales[b]																					
A2_5	Scheduled phone visits or group visits with the physician, PA, NP, or nurse																				
10 to 12	Generally available; patients are regularly asked about their preferences for phone or group visits	n.a.	11.1	9.5	16.1	9.3	n.a.	18.7	9.3	4.2	12.1	n.a.	17.5	0.0	8.4	11.0	n.a.	4.5	7.6	1.5	4.6

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
7 to 9	Generally available at a patient's request	n.a.	11.1	25.7	1.5	26.2	n.a.	16.0	12.0	12.5	4.1	n.a.	12.7	33.9	17.6	21.4	n.a.	16.7	24.2	20.1	23.6
4 to 6	Available on a limited basis for practice patients	n.a.	16.7	14.9	17.7	1.3	n.a.	17.3	24.0	33.0	10.7	n.a.	12.7	4.8	3.7	18.8	n.a.	31.8	33.3	22.1	30.2
1 to 3	Not regularly available to practice patients	n.a.	61.1	50.0	64.6	63.2	n.a.	48.0	54.7	50.4	73.1	n.a.	57.1	61.3	70.3	48.8	n.a.	47.0	34.8	56.3	41.5
	N	n.a.	72	74	34	36	n.a.	75	75	64	55	n.a.	63	62	39	42	n.a.	66	66	48	43
A2_13	Notification of patients of their laboratory and radiology results																				
10 to 12	Consistently done for abnormal and normal results	63.5	84.9	72.6	81.3	74.6	76.0	80.0	71.6	90.4	83.9	79.4	76.2	88.7	88.8	95.7	68.2	65.2	86.4	72.6	83.2
7 to 9	Consistently done for abnormal results; sporadically done for normal results	35.1	15.1	24.7	18.7	25.4	24.0	20.0	28.4	9.6	16.1	20.6	22.2	11.3	11.2	4.3	31.8	34.8	13.6	27.4	16.8
4 to 6	Sometimes done	0.0	0.0	2.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
1 to 3	Not generally done	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	74	73	73	33	36	75	75	74	65	54	63	63	62	39	41	66	66	66	48	43
A2_25	Shared decision making aids used to help patients and providers jointly decide on treatment options																				
10 to 12	Consistently provided to patients for two or more clinical conditions; provision is tracked with run charts or other measures	n.a.	37.8	54.1	33.8	27.3	n.a.	14.7	66.7	24.7	40.0	n.a.	34.9	38.1	23.1	30.4	n.a.	43.9	68.2	18.4	43.4
7 to 9	Consistently provided to patients for two or more clinical conditions; provision is not formally tracked	n.a.	21.6	32.4	19.5	18.2	n.a.	26.7	28.0	31.6	31.7	n.a.	11.1	44.4	33.2	27.5	n.a.	15.2	21.2	19.2	19.7
4 to 6	Sometimes provided to patients for one or more clinical conditions	n.a.	39.2	13.5	43.7	45.9	n.a.	58.7	5.3	33.5	21.7	n.a.	50.8	17.5	20.7	37.0	n.a.	33.3	9.1	51.8	33.4
1 to 3	Not provided to patients	n.a.	1.4	0.0	3.0	8.6	n.a.	0.0	0.0	10.2	6.6	n.a.	3.2	0.0	23.0	5.1	n.a.	7.6	1.5	10.5	3.6
	N	n.a.	74	74	34	36	n.a.	75	75	65	55	n.a.	63	63	39	40	n.a.	66	66	48	43

Table A.4b. (*continued*)

Question		NY					OH/KY					OK					OR				
		CPC			Comparison		CPC			Comparison		CPC			Comparison		CPC			Comparison	
		2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015	2012	2014	2015	2014	2015
A2_33	Timely receipt of information about our patients after they visit specialists in my community																				
10 to 12	Occurs for all patients	n.a.	12.3	14.9	26.5	49.2	n.a.	9.3	13.3	10.6	29.1	n.a.	19.0	12.7	25.9	35.1	n.a.	15.2	18.2	11.6	8.7
7 to 9	Occurs for most patients	n.a.	67.1	68.9	62.5	40.7	n.a.	69.3	76.0	77.3	62.2	n.a.	46.0	58.7	61.9	44.3	n.a.	69.7	74.2	73.7	87.2
4 to 6	Occurs for some patients	n.a.	19.2	16.2	6.0	10.1	n.a.	21.3	10.7	12.1	8.0	n.a.	30.2	25.4	7.0	20.0	n.a.	12.1	7.6	11.4	4.1
1 to 3	Does not occur consistently for patients	n.a.	1.4	0.0	5.0	0.0	n.a.	0.0	0.0	0.0	0.6	n.a.	4.8	3.2	5.1	0.6	n.a.	3.0	0.0	3.3	0.0
	N	n.a.	73	74	34	36	n.a.	75	75	64	55	n.a.	63	63	39	42	n.a.	66	66	48	42

Sources: CPC practice surveys administered to CPC practices October through December 2012, and to CPC and comparison practices April through July 2014, and April through August 2015.

Note: Question number pertain to the 2015 CPC practice survey.

[a] The 2014 sample size for comparison responses is larger than the sample sizes for the other questions because these six questions were asked on the short form version of 2014 practice survey administered to comparison practices. The short form version was not administered to comparison practices in 2015.

[b] Four questions are not included in the composite scores for the seven M-PCMH-A domains, because three questions were not asked in the first survey round (A2_5, A2_25, A2_33), and one question (A2_13) was determined to be not statistically related to any function of primary care delivery in our Factor Analysis.

n.a. = not applicable because the question was not asked in the given survey round; M-PCMH-A = Patient-Centered Medical Home Assessment modified for the CPC evaluation; PA = physician assistant; NP = nurse practitioner; ER = emergency room; EHR = electronic health record; QI = quality improvement; CAHPS = Consumer Assessment of Healthcare Providers and Systems.

Table A.5. CPC and comparison practice infrastructure in 2014 and 2015, overall and by region (percentage of practices unless specified)

		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
Question		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Practice characteristics																			
B1	Medical organization that employs clinicians at this practice site[a]																		
	Independent solo or two clinician practice	16.5	17.5	25.3	24.1	33.3	31.8	13.9	15.3	35.3	35.3	9.5	12.7	6.7	10.7	14.3	14.3	4.6	3.0
	Independent group practice (three or more clinicians)	33.3	33.5	34.2	34.8	21.2	21.2	54.2	54.2	50.0	48.5	28.4	45.1	26.7	13.3	12.7	12.7	37.9	37.9
	Group or staff model HMO	1.9	0.4	2.6	1.8	0.0	0.0	0.0	0.0	0.0	0.0	8.1	2.8	1.3	0.0	1.6	0.0	1.5	0.0
	Network of clinician practices owned by a hospital, hospital system, or medical school	38.0	41.0	29.2	29.2	39.4	42.4	25.0	26.4	2.9	10.3	37.8	33.8	64.0	66.7	58.7	61.9	37.9	45.5
	Hospital or medical school	6.0	3.1	2.5	3.7	4.6	3.0	4.2	1.4	10.3	2.9	4.1	4.2	1.3	1.3	4.8	4.8	13.6	4.6
	Community health center or clinic	0.2	0.4	1.0	0.2	0.0	0.0	1.4	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
	Other	4.1	4.2	5.3	6.2	1.5	1.5	1.4	1.4	1.5	2.9	12.2	1.4	0.0	8.0	7.9	6.4	4.6	7.6
	N	484	481	417	338	66	66	72	72	68	68	74	71	75	75	63	63	66	66
B2	*Number* of practice sites in each organization[a]																		
	Mean	25.5	34.5	13.5	16.4	15.0	12.1	12.5	51.9	7.5	9.4	20.9	26.1	67.8	71.0	22.9	30.7	29.0	35.1
	Median	9	11	2	4	1	1	3	4	1	1	21	28	96	100	15	13	6	7
	N	484	484	423	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66
B3	Practice ownership (multiple responses possible)[a]																		
	Physicians in the practice	50.0	49.0	61.0	62.0	56.0	56.0	67.0	56.0	79.0	82.0	62.0	58.0	23.0	25.0	24.0	24.0	36.0	39.0
	Nonphysician clinicians (nurse practitioners or physician assistants) in the practice	1.0	2.0	5.0	3.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	1.0	0.0	5.0	2.0	0.0	6.0	6.0
	Another physician organization	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	2.0
	Public or private hospital, health system, or foundation owned by a hospital	42.0	41.0	30.0	32.0	36.0	36.0	28.0	28.0	13.0	13.0	38.0	32.0	65.0	63.0	63.0	65.0	48.0	52.0
	Insurance company, health plan or HMO	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0
	Medical school or university	2.0	2.0	2.0	2.0	8.0	8.0	0.0	0.0	1.0	1.0	0.0	0.0	0.0	0.0	3.0	3.0	5.0	5.0
	Other	7.0	8.0	5.0	3.0	2.0	3.0	6.0	18.0	6.0	3.0	1.0	7.0	12.0	7.0	8.0	8.0	14.0	9.0
	N	484	484	349	337	66	66	72	72	68	68	74	74	75	75	63	63	66	66

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B4	Practice is affiliated with or contracts with (multiple responses possible)																		
	Independent practice association	25.0	30.0	36.0	43.0	16.0	11.0	43.0	62.0	25.0	37.0	15.0	16.0	3.0	3.0	16.0	18.0	56.0	59.0
	Physician hospital organization	25.0	30.0	23.0	30.0	59.0	43.0	14.0	24.0	16.0	15.0	14.0	25.0	38.0	64.0	25.0	16.0	8.0	15.0
	Accountable care organization	14.0	21.0	34.0	46.0	5.0	8.0	10.0	41.0	17.0	21.0	3.0	5.0	7.0	6.0	5.0	10.0	53.0	57.0
	N	463	463	313	307	64	63	70	71	64	60	73	72	71	74	60	62	61	61
ACO composite	Composite measure of whether practice is participating in an ACO (answered yes to at least one of the questions: B4c, B10c, B10e)[b]																		
	Yes	13.2	19.4	35.8	53.6	4.6	7.6	9.7	38.9	16.2	19.1	2.7	4.1	6.7	5.3	4.8	9.5	50.0	53.0
	No	86.8	80.6	64.3	46.4	95.5	92.4	90.3	61.1	83.8	80.9	97.3	96.0	93.3	94.7	95.2	90.5	50.0	47.0
	N	484	484	354	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66
Among practices in a system or group (B1), practice site autonomy to implement changes without approval from health care system or group																			
B5a	Staff hiring																		
	Little/no autonomy	7.7	4.2	12.7	10.4	3.5	6.9	14.3	10.0	11.1	11.1	2.7	3.2	0.0	0.0	19.5	7.1	8.6	0.0
	Some autonomy	19.8	15.4	9.5	16.3	13.8	10.3	0.0	10.0	0.0	0.0	32.4	45.2	6.0	2.0	53.7	19.1	8.6	15.2
	Moderate autonomy	27.5	25.7	23.2	31.9	58.6	41.4	66.7	25.0	22.2	22.2	29.7	41.9	6.0	14.0	9.8	9.5	28.6	36.4
	High autonomy	44.1	54.7	46.8	41.5	24.1	41.4	19.1	55.0	66.7	66.7	35.1	9.7	86.0	84.0	14.6	64.3	54.3	48.5
	Not applicable/not part of system	0.9	n.a.	7.9	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	2.0	n.a.	2.4	n.a.	0.0	n.a.
	N	222	214	108	96	29	29	21	20	9	9	37	31	50	50	41	42	35	33
B5b	Organizational priorities (for example, picking a specific quality improvement goal)																		
	Little/no autonomy	5.0	2.8	6.1	10.2	0.0	0.0	42.9	0.0	0.0	0.0	0.0	6.3	0.0	4.0	4.9	0.0	0.0	6.1
	Some autonomy	22.2	27.0	21.6	27.2	55.2	24.1	4.8	65.0	0.0	66.7	33.3	50.0	22.0	14.0	12.2	9.5	11.4	15.2
	Moderate autonomy	42.5	37.2	28.1	42.6	10.3	41.4	9.5	15.0	33.3	22.2	36.1	34.4	72.0	50.0	46.3	21.4	51.4	54.6
	High autonomy	29.9	33.0	36.3	20.0	34.5	34.5	42.9	20.0	66.7	11.1	30.6	9.4	4.0	32.0	36.6	69.1	37.1	24.2
	Not applicable/not part of system	0.5	n.a.	8.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	2.0	n.a.	0.0	n.a.	0.0	n.a.
	N	221	215	107	97	29	29	21	20	9	9	36	32	50	50	41	42	35	33
B5c	Clinical work processes (for example, process for rooming patients)																		
	Little/no autonomy	0.5	0.9	3.3	2.9	3.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.1
	Some autonomy	12.7	11.2	7.3	12.6	0.0	3.5	4.8	25.0	0.0	0.0	54.1	43.8	2.0	0.0	2.4	0.0	14.3	12.1
	Moderate autonomy	19.0	43.3	31.3	31.0	6.9	41.4	66.7	60.0	37.5	22.2	8.1	28.1	8.0	45.1	12.2	48.8	31.4	45.5
	High autonomy	67.4	44.7	50.2	53.6	89.7	55.2	28.6	15.0	62.5	77.8	37.8	28.1	88.0	54.9	85.4	51.2	54.3	36.4
	Not applicable/not part of system	0.5	n.a.	8.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	2.0	n.a.	0.0	n.a.	0.0	n.a.
	N	221	215	107	96	29	29	21	20	8	9	37	32	50	51	41	41	35	33

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B5d	Planning for and completion of CPC Milestones																		
	Little/no autonomy	1.4	8.9	n.a.	n.a.	0.0	0.0	4.8	0.0	0.0	0.0	0.0	6.5	0.0	0.0	4.9	35.7	0.0	6.1
	Some autonomy	20.0	21.6	n.a.	n.a.	3.6	7.4	9.5	20.0	0.0	0.0	32.4	45.2	44.0	45.1	12.2	0.0	5.9	9.1
	Moderate autonomy	35.5	37.1	n.a.	n.a.	21.4	59.3	14.3	10.0	88.9	77.8	32.4	35.5	48.0	47.1	29.3	21.4	38.2	30.3
	High autonomy	42.7	32.4	n.a.	n.a.	75.0	33.3	71.4	70.0	11.1	22.2	35.1	12.9	6.0	7.8	53.7	42.9	55.9	54.6
	Not applicable/not part of system	0.5	n.a.	n.a.	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	2.0	n.a.	0.0	n.a.	0.0	n.a.
	N	220	213	n.a.	n.a.	28	27	21	20	9	9	37	31	50	51	41	42	34	33
Number and types of patients seen																			
B6	Total *number* of different patients seen in past year by practice site[a]																		
	Mean	6,416.7	6,768.6	10,670.0	11,154.6	5,414.4	6,199.6	6,617.6	6,989.7	4,684.9	5,345.3	4,958.3	5,068.8	5,417.8	6,067.8	9,149.3	7,104.7	9,088.1	10,943.0
	Median	4,700	4,400	6,700	5,502	3,500	3,870	5,000	4,900	3,000	3,372.5	3730	3,783.5	4,731.5	4,500	5,600	4,051	6,111.5	5,100
	N	484	484	423	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66
B7	Practice site charges a “retainer” or “concierge” fee for some or all of its patients																		
	Yes	0.6	0.8	3.0	3.1	0.0	0.0	1.4	0.0	0.0	0.0	0.0	1.4	0.0	0.0	1.6	3.2	1.5	1.5
	No	99.4	99.2	97.0	96.9	100.0	100.0	98.6	100.0	100.0	100.0	100.0	98.7	100.0	100.0	98.4	96.8	98.5	98.5
	N	484	484	345	336	66	66	72	72	68	68	74	74	75	75	63	63	66	66
B8	Practice site accepts new Medicare patients (including managed care patients)																		
	None of these patients	2.1	4.4	6.0	6.4	1.5	0.0	2.8	5.6	1.5	0.0	2.7	1.4	1.3	2.7	1.6	11.1	3.0	10.6
	Some of these patients	17.0	16.6	18.2	20.4	21.2	24.6	27.8	30.6	2.9	4.4	5.5	9.5	5.3	5.3	30.2	14.3	28.8	28.8
	Most of these patients	19.3	23.4	23.3	25.7	34.9	41.5	12.5	8.3	14.7	13.2	5.5	10.8	26.7	29.3	22.2	34.9	19.7	28.8
	All of these patients	61.7	55.7	52.4	47.5	42.4	33.9	56.9	55.6	80.9	82.4	86.3	78.4	66.7	62.7	46.0	39.7	48.5	31.8
	N	483	483	345	336	66	65	72	72	68	68	73	74	75	75	63	63	66	66
B9_1	Clinician (physician/PA/NP) owner compensation (multiple responses possible)[a]																		
	Salary	40.0	42.0	52.0	48.0	52.0	52.0	32.0	38.0	63.0	65.0	55.0	55.0	32.0	35.0	22.0	25.0	24.0	20.0
	Productivity incentives, including profit sharing	35.0	32.0	46.0	45.0	29.0	30.0	49.0	43.0	38.0	32.0	45.0	28.0	40.0	44.0	10.0	16.0	33.0	27.0
	Quality incentives	18.0	20.0	27.0	25.0	20.0	24.0	24.0	15.0	15.0	21.0	20.0	19.0	21.0	31.0	11.0	8.0	11.0	18.0
	Other	5.0	6.0	7.0	4.0	3.0	3.0	3.0	1.0	7.0	10.0	9.0	3.0	4.0	0.0	2.0	11.0	9.0	15.0
	Not applicable	11.0	12.0	11.0	10.0	8.0	8.0	14.0	25.0	3.0	4.0	12.0	11.0	7.0	12.0	13.0	5.0	14.0	17.0
	N	484	484	423	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B9_2	Non-owner physician compensation (multiple responses possible)[a]																		
	Salary	60.0	59.0	42.0	44.0	50.0	50.0	64.0	64.0	56.0	59.0	66.0	58.0	36.0	45.0	70.0	63.0	80.0	77.0
	Productivity incentives, including profit sharing	49.0	55.0	38.0	41.0	53.0	53.0	50.0	64.0	24.0	25.0	57.0	51.0	48.0	67.0	65.0	68.0	48.0	55.0
	Quality incentives	35.0	44.0	17.0	22.0	44.0	44.0	22.0	46.0	26.0	31.0	39.0	31.0	43.0	49.0	25.0	52.0	41.0	53.0
	Other	5.0	4.0	2.0	2.0	2.0	3.0	1.0	0.0	1.0	1.0	11.0	1.0	5.0	3.0	3.0	2.0	8.0	15.0
	Not applicable	10.0	10.0	12.0	10.0	17.0	12.0	13.0	13.0	10.0	15.0	5.0	7.0	16.0	19.0	2.0	5.0	3.0	2.0
	N	484	484	423	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66
B9_3	Non-owner PA/NP compensation (multiple responses possible)[a]																		
	Salary	56.0	58.0	45.0	54.0	59.0	59.0	75.0	78.0	47.0	56.0	68.0	65.0	31.0	36.0	35.0	43.0	74.0	73.0
	Productivity incentives, including profit sharing	31.0	35.0	21.0	35.0	33.0	36.0	53.0	56.0	10.0	12.0	35.0	34.0	20.0	32.0	27.0	30.0	39.0	42.0
	Quality incentives	16.0	22.0	11.0	13.0	29.0	24.0	8.0	14.0	10.0	25.0	15.0	14.0	11.0	20.0	10.0	13.0	29.0	44.0
	Other	3.0	3.0	2.0	3.0	5.0	3.0	1.0	0.0	1.0	1.0	1.0	3.0	3.0	2.0	3.0	0.0	5.0	11.0
	Not applicable	9.0	7.0	13.0	4.0	20.0	11.0	4.0	1.0	15.0	10.0	8.0	5.0	8.0	17.0	5.0	2.0	3.0	3.0
	N	484	484	423	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66
Practice participation in other initiatives																			
B10	Practice participation in other initiatives																		
	The Physician Quality Reporting System	88.0	93.0	77.0	83.0	89.0	88.0	92.0	90.0	90.0	96.0	93.0	97.0	99.0	97.0	60.0	89.0	91.0	91.0
	Health Care Innovation Awards	7.0	9.0	12.0	21.0	17.0	18.0	4.0	3.0	4.0	7.0	4.0	11.0	15.0	11.0	0.0	10.0	3.0	5.0
	Medicare Shared Savings Program	n.a.	n.a.	24.0	33.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Independence at Home	n.a.	n.a.	1.0	3.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Pioneer ACO	n.a.	n.a.	4.0	5.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Meaningful Use/EHR Incentive	n.a.	99.0	n.a.	87.0	n.a.	100.0	n.a.	99.0	n.a.	100.0	n.a.	99.0	n.a.	99.0	n.a.	98.0	n.a.	97.0
	Medicaid Health Home	17.0	18.0	17.0	15.0	11.0	23.0	21.0	26.0	0.0	1.0	5.0	4.0	5.0	7.0	27.0	22.0	55.0	47.0
	State/community-based quality measures reporting program	24.0	26.0	25.0	26.0	5.0	27.0	14.0	15.0	4.0	18.0	18.0	16.0	65.0	23.0	5.0	6.0	50.0	79.0
	State/regional health information exchange	43.0	55.0	25.0	26.0	41.0	38.0	46.0	67.0	22.0	32.0	42.0	45.0	73.0	87.0	51.0	63.0	26.0	47.0
	Purchaser sponsored program linking payment to performance or value	39.0	46.0	32.0	23.0	26.0	21.0	51.0	54.0	54.0	60.0	30.0	35.0	45.0	56.0	16.0	33.0	50.0	61.0
	Consortium or collaborative working on quality improvement	27.0	21.0	18.0	13.0	24.0	17.0	31.0	24.0	13.0	10.0	4.0	16.0	69.0	44.0	10.0	6.0	33.0	29.0
	N	484	484	354	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B11	Practice has recognition as a medical home from (multiple responses possible)[a]:																		
	Any medical home recognition	62.0	64.0	51.0	56.0	32.0	20.0	57.0	64.0	63.0	75.0	65.0	66.0	91.0	93.0	24.0	24.0	100.0	100.0
	National Committee for Quality Assurance (NCQA-PCMH)	44.0	49.0	38.0	40.0	27.0	15.0	47.0	63.0	40.0	54.0	58.0	66.0	89.0	93.0	5.0	6.0	32.0	35.0
	- NCQA Level 1	2.0	1.0	4.0	3.0	0.0	0.0	3.0	3.0	1.0	0.0	9.0	5.0	1.0	0.0	0.0	0.0	0.0	0.0
	- NCQA Level 2	5.0	5.0	2.0	4.0	23.0	5.0	3.0	4.0	7.0	12.0	1.0	7.0	0.0	3.0	0.0	2.0	2.0	6.0
	- NCQA Level 3	35.0	42.0	27.0	31.0	5.0	11.0	42.0	56.0	29.0	40.0	47.0	53.0	87.0	88.0	5.0	5.0	18.0	32.0
	- NCQA level not specified	0.0	1.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	0.0	3.0	0.0	0.0	0.0	0.0
	The Joint Commission	2.0	3.0	6.0	6.0	2.0	0.0	4.0	4.0	0.0	0.0	1.0	11.0	1.0	0.0	0.0	2.0	8.0	2.0
	Accreditation Association for Ambulatory Healthcare	1.0	0.0	1.0	0.0	0.0	0.0	1.0	0.0	0.0	0.0	3.0	1.0	0.0	0.0	0.0	2.0	2.0	0.0
	Utilization Review Accreditation Commission	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	State-based recognition program	16.0	13.0	9.0	12.0	3.0	2.0	6.0	3.0	0.0	0.0	0.0	0.0	4.0	0.0	11.0	10.0	94.0	85.0
	Insurance plan-based recognition program	10.0	11.0	8.0	9.0	0.0	2.0	8.0	6.0	21.0	34.0	14.0	15.0	4.0	1.0	3.0	2.0	21.0	18.0
	Other	3.0	4.0	2.0	4.0	0.0	3.0	1.0	1.0	9.0	4.0	0.0	3.0	1.0	3.0	10.0	8.0	3.0	6.0
	N	484	484	423	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66
Practice staff and roles																			
B12a_b_1_2	Number of full- or part-time physicians (primary care and specialty) at the practice site																		
	One to two	20.0	23.0	26.0	28.0	38.0	39.0	11.0	17.0	28.0	32.0	24.0	26.0	17.0	16.0	21.0	24.0	3.0	5.0
	Two	21.0	21.0	18.0	15.0	17.0	17.0	26.0	26.0	19.0	18.0	30.0	27.0	21.0	21.0	17.0	18.0	18.0	17.0
	Three	16.0	15.0	10.0	13.0	8.0	6.0	20.0	15.0	15.0	10.0	18.0	12.0	21.0	23.0	19.0	23.0	11.0	15.0
	Four to six	28.0	25.0	24.0	24.0	27.0	23.0	29.0	22.0	29.0	29.0	18.0	20.0	36.0	33.0	33.0	27.0	24.0	23.0
	More than seven	14.0	16.0	22.0	21.0	11.0	15.0	14.0	19.0	9.0	10.0	11.0	15.0	4.0	7.0	10.0	8.0	44.0	41.0
	N	477	483	333	336	66	66	70	72	68	68	74	74	75	75	58	62	66	66
B12j_1_2	Number of full- or part-time care managers/care coordinators																		
	None	16.0	21.0	65.0	64.0	24.0	30.0	13.0	17.0	24.0	31.0	20.0	14.0	9.0	13.0	7.0	15.0	12.0	27.0
	One	64.0	57.0	26.0	27.0	47.0	42.0	67.0	58.0	57.0	51.0	70.0	76.0	69.0	61.0	67.0	48.0	67.0	55.0
	Two	14.0	15.0	7.0	5.0	18.0	12.0	16.0	19.0	16.0	12.0	8.0	11.0	16.0	20.0	16.0	23.0	12.0	11.0
	More than three	6.0	7.0	2.0	4.0	11.0	15.0	4.0	6.0	3.0	6.0	1.0	0.0	5.0	5.0	10.0	15.0	9.0	8.0
	N	477	483	333	332	66	66	70	72	68	68	74	74	75	75	58	62	66	66

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B12	Practice site has full- or part-time[a]:																		
B12a	Primary care physicians (MD/DO)	100.0	100.0	97.0	97.0	100.0	100.0	100.0	100.0	99.0	100.0	100.0	100.0	100.0	99.0	98.0	100.0	100.0	100.0
B12b	Specialty physicians	12.0	13.0	22.0	20.0	5.0	12.0	11.0	8.0	12.0	16.0	8.0	12.0	7.0	5.0	19.0	16.0	24.0	20.0
B12c	NP/PAs who bill under own National Provider Identifier (NPI)	44.0	48.0	47.0	56.0	44.0	52.0	41.0	51.0	28.0	22.0	51.0	57.0	33.0	40.0	53.0	37.0	59.0	74.0
B12d	NP/PAs who do not bill under own NPI	21.0	20.0	17.0	11.0	30.0	27.0	39.0	28.0	26.0	29.0	18.0	18.0	7.0	9.0	14.0	24.0	15.0	5.0
B12e	Registered nurses (RNs)	45.0	49.0	45.0	42.0	38.0	41.0	33.0	49.0	60.0	57.0	51.0	47.0	47.0	40.0	22.0	32.0	62.0	76.0
B12f	Licensed practical nurses or licensed vocational nurses (LPNs/LVNs)	50.0	51.0	52.0	51.0	86.0	89.0	24.0	18.0	29.0	31.0	82.0	77.0	45.0	51.0	50.0	60.0	33.0	35.0
B12g	Medical assistants (MAs)	88.0	89.0	84.0	86.0	64.0	73.0	97.0	99.0	93.0	93.0	69.0	74.0	97.0	97.0	97.0	92.0	100.0	97.0
B12h	Receptionists	95.0	95.0	96.0	94.0	97.0	98.0	99.0	99.0	90.0	91.0	95.0	91.0	91.0	92.0	98.0	98.0	100.0	100.0
B12i	Practice supervisors/managers	89.0	90.0	85.0	88.0	89.0	88.0	89.0	90.0	75.0	78.0	89.0	92.0	99.0	96.0	90.0	94.0	94.0	94.0
B12j	Care managers/care coordinators	84.0	79.0	35.0	36.0	76.0	70.0	87.0	83.0	76.0	69.0	80.0	86.0	91.0	87.0	93.0	85.0	88.0	73.0
B12k	Community services coordinators	4.0	3.0	3.0	2.0	6.0	2.0	1.0	6.0	4.0	1.0	3.0	1.0	4.0	3.0	9.0	6.0	5.0	3.0
B12l	Health educators	9.0	11.0	7.0	7.0	8.0	9.0	11.0	21.0	4.0	4.0	11.0	3.0	12.0	12.0	12.0	8.0	6.0	18.0
B12m	Quality improvement (QI) specialists	11.0	16.0	8.0	8.0	23.0	14.0	21.0	39.0	6.0	12.0	5.0	14.0	9.0	13.0	5.0	5.0	5.0	17.0
B12n	Behavioral health/clinical psychologists/social workers	19.0	23.0	9.0	7.0	12.0	15.0	43.0	36.0	7.0	9.0	3.0	16.0	0.0	1.0	12.0	27.0	56.0	61.0
B12o	Physical/respiratory therapists	3.0	4.0	3.0	7.0	3.0	3.0	4.0	3.0	1.0	3.0	0.0	3.0	4.0	5.0	7.0	5.0	3.0	5.0
B12p	Lab/radiology technicians	31.0	32.0	41.0	41.0	59.0	61.0	33.0	36.0	18.0	15.0	5.0	15.0	23.0	13.0	34.0	42.0	48.0	50.0
B12q	Dieticians/nutritionists	10.0	13.0	12.0	11.0	6.0	8.0	9.0	13.0	13.0	12.0	9.0	20.0	8.0	12.0	12.0	15.0	14.0	15.0
B12r	Pharmacists/pharmacy technicians	15.0	18.0	4.0	3.0	12.0	20.0	16.0	22.0	10.0	6.0	1.0	11.0	9.0	12.0	12.0	10.0	44.0	47.0
B12s	Health information technologist or EHR specialist	16.0	16.0	16.0	11.0	26.0	20.0	17.0	17.0	16.0	21.0	8.0	18.0	4.0	7.0	14.0	11.0	27.0	21.0
B12t	Accountants/financial managers	13.0	16.0	15.0	18.0	20.0	12.0	21.0	32.0	15.0	18.0	5.0	9.0	4.0	12.0	10.0	11.0	17.0	18.0
B12u	Billing staff	51.0	51.0	62.0	62.0	71.0	73.0	69.0	57.0	53.0	49.0	47.0	45.0	24.0	27.0	24.0	50.0	65.0	62.0
B12v	Other staff	20.0	18.0	6.0	7.0	15.0	23.0	14.0	10.0	22.0	21.0	15.0	11.0	17.0	11.0	21.0	21.0	39.0	33.0
	N	484	484	423	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B13	Changes in practice staffing in the last year[a]																		
	Hired or contracted any staff to fill new roles or functions	88.0	55.0	45.0	35.0	82.0	61.0	78.0	63.0	93.0	47.0	85.0	38.0	95.0	47.0	94.0	68.0	92.0	67.0
	Moved any existing staff into new roles or functions	62.0	44.0	40.0	35.0	79.0	45.0	76.0	57.0	69.0	34.0	58.0	39.0	55.0	35.0	25.0	38.0	67.0	58.0
	Hired or contracted any new staff to fill existing roles	32.0	59.0	42.0	50.0	36.0	61.0	42.0	81.0	31.0	44.0	18.0	34.0	25.0	59.0	25.0	71.0	47.0	68.0
	Moved clinical staff from other practice sites to this practice site	4.0	11.0	8.0	10.0	3.0	8.0	4.0	17.0	1.0	3.0	4.0	11.0	3.0	8.0	6.0	10.0	9.0	21.0
	Moved nonclinical staff from other practice sites to this practice site	4.0	4.0	4.0	8.0	0.0	5.0	17.0	4.0	1.0	1.0	0.0	1.0	0.0	3.0	0.0	5.0	11.0	9.0
	Eliminated some existing staff and their roles or functions	3.0	10.0	20.0	15.0	6.0	9.0	1.0	10.0	4.0	12.0	1.0	8.0	0.0	4.0	3.0	11.0	8.0	14.0
	Other	4.0	4.0	2.0	3.0	3.0	2.0	3.0	4.0	1.0	7.0	11.0	5.0	1.0	7.0	5.0	3.0	3.0	2.0
	Did not make any staffing changes	4.0	31.0	21.0	25.0	3.0	32.0	1.0	17.0	1.0	37.0	7.0	30.0	3.0	40.0	10.0	25.0	3.0	35.0
	N	484	484	423	340	66	66	72	72	68	68	74	74	75	75	63	63	66	66
B13a	Among practices that made staffing changes in the last year, changes in practice staffing in the last year as a result of CPC																		
	Hired or contracted any staff to fill new roles or functions	88.0	66.0	n.a.	n.a.	84.0	85.0	77.0	55.0	88.0	69.0	91.0	49.0	93.0	60.0	91.0	74.0	92.0	81.0
	Moved any existing staff into new roles or functions	60.0	48.0	n.a.	n.a.	74.0	51.0	76.0	53.0	67.0	48.0	57.0	49.0	51.0	42.0	25.0	33.0	67.0	57.0
	Hired or contracted any new staff to fill existing roles	22.0	41.0	n.a.	n.a.	20.0	39.0	37.0	62.0	19.0	31.0	16.0	29.0	19.0	33.0	16.0	37.0	27.0	52.0
	Moved clinical staff from other practice sites to this practice site	1.0	9.0	n.a.	n.a.	2.0	7.0	1.0	16.0	0.0	0.0	1.0	12.0	1.0	7.0	2.0	2.0	2.0	17.0
	Moved nonclinical staff from other practice sites to this practice site	3.0	1.0	n.a.	n.a.	0.0	0.0	15.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	5.0	5.0
	Eliminated some existing staff and their roles or functions	1.0	4.0	n.a.	n.a.	0.0	5.0	0.0	2.0	1.0	5.0	0.0	4.0	0.0	0.0	2.0	2.0	2.0	10.0
	Other	2.0	2.0	n.a.	n.a.	2.0	2.0	0.0	3.0	0.0	5.0	6.0	2.0	1.0	2.0	0.0	2.0	3.0	0.0

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	Did not make any staffing changes	0.0	0.0	n.a.	n.a.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	460	325	n.a.	n.a.	61	41	71	58	67	42	68	51	73	45	56	46	64	42
B13b	Care teams at this practice site participate in team huddles																		
	Yes	n.a.	82.4	n.a.	70.2	n.a.	68.2	n.a.	84.7	n.a.	92.7	n.a.	83.8	n.a.	90.7	n.a.	66.7	n.a.	87.9
	No	n.a.	17.6	n.a.	29.8	n.a.	31.8	n.a.	15.3	n.a.	7.4	n.a.	16.2	n.a.	9.3	n.a.	33.3	n.a.	12.1
	N	n.a.	484	n.a.	331	n.a.	66	n.a.	72	n.a.	68	n.a.	74	n.a.	75	n.a.	63	n.a.	66
Use of health information technology																			
B14	Practice site uses EHR system to manage patient care[a]																		
	Yes	99.8	100.0	97.2	95.8	100.0	100.0	98.6	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
	No	0.2	0.0	2.8	4.2	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	484	484	404	332	66	66	72	72	68	68	74	74	75	75	63	63	66	66
B15	Among practices using an EHR, practice site uses EHR's e-prescribing functionality																		
	Yes	99.6	98.8	99.6	98.3	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	96.8	100.0	100.0	90.9
	No, the EHR does not include e-prescribing functionality	0.0	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	No, the clinicians do not use the EHR's e-prescribing function	0.2	0.0	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
	Don't know	0.2	1.2	0.0	1.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	9.1
	N	483	484	320	309	66	66	71	72	68	68	74	74	75	75	63	63	66	66
B16	Among practices using an EHR, practice uses data extracts or reports generated from EHR to guide QI efforts																		
	Yes	97.1	96.3	83.5	87.1	97.0	95.5	100.0	100.0	98.5	97.1	89.2	86.3	100.0	100.0	96.8	95.2	98.5	100.0
	No	1.9	2.7	7.2	8.4	3.0	1.5	0.0	0.0	0.0	2.9	6.8	11.0	0.0	0.0	1.6	3.2	1.5	0.0
	Don't know	1.0	1.0	9.4	4.6	0.0	3.0	0.0	0.0	1.5	0.0	4.1	2.7	0.0	0.0	1.6	1.6	0.0	0.0
	N	483	481	316	306	66	66	71	71	68	68	74	73	75	75	63	62	66	66
B16a	Among practices using an EHR, type of staff responsible for extracting data or generating reports from EHR to guide quality improvement efforts (multiple responses possible)																		
	Primary care physician (MD/DO)	27.0	24.0	36.0	38.0	13.0	19.0	27.0	27.0	46.0	39.0	15.0	8.0	40.0	39.0	16.0	10.0	26.0	24.0
	NP/PA	9.0	8.0	13.0	12.0	5.0	8.0	10.0	14.0	13.0	5.0	8.0	5.0	5.0	9.0	3.0	2.0	15.0	14.0

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	RN, LPN, or LVN	23.0	20.0	15.0	16.0	16.0	11.0	25.0	28.0	22.0	24.0	18.0	19.0	28.0	20.0	23.0	14.0	31.0	21.0
	MA	23.0	19.0	24.0	20.0	3.0	3.0	44.0	35.0	27.0	20.0	6.0	8.0	31.0	33.0	8.0	3.0	40.0	21.0
	Practice supervisor or practice manager	53.0	55.0	62.0	66.0	61.0	63.0	49.0	55.0	43.0	53.0	32.0	32.0	63.0	61.0	59.0	46.0	66.0	70.0
	Care manager or care coordinator	54.0	48.0	21.0	27.0	50.0	49.0	56.0	42.0	43.0	44.0	23.0	13.0	51.0	67.0	85.0	69.0	74.0	50.0
	Medical records staff	6.0	5.0	10.0	14.0	2.0	2.0	7.0	3.0	1.0	0.0	8.0	8.0	9.0	5.0	5.0	5.0	8.0	11.0
	Data analyst	29.0	32.0	18.0	20.0	2.0	13.0	17.0	34.0	15.0	15.0	29.0	13.0	49.0	48.0	49.0	53.0	45.0	50.0
	QI specialist	26.0	31.0	23.0	21.0	27.0	24.0	48.0	38.0	10.0	18.0	15.0	41.0	37.0	33.0	13.0	41.0	28.0	24.0
	Health information technologist or EHR specialist	27.0	27.0	15.0	24.0	27.0	19.0	15.0	25.0	27.0	27.0	21.0	27.0	51.0	40.0	21.0	25.0	22.0	24.0
	Other	17.0	17.0	11.0	11.0	14.0	11.0	13.0	8.0	19.0	20.0	18.0	11.0	31.0	25.0	0.0	10.0	22.0	33.0
	N	469	463	253	240	64	63	71	71	67	66	66	63	75	75	61	59	65	66
B17	Practice site is part of a health care system or medical group																		
	Yes	68.1	65.6	59.8	63.6	53.0	47.0	52.1	52.8	39.7	38.2	81.1	75.0	87.8	88.0	82.5	82.5	78.8	74.2
	No	32.0	34.4	40.2	36.4	47.0	53.0	47.9	47.2	60.3	61.8	18.9	25.0	12.2	12.0	17.5	17.5	21.2	25.8
	N	482	482	319	310	66	66	71	72	68	68	74	72	74	75	63	63	66	66
B17a	**Among practice sites that use an EHR and are *in a health care system or group* (from B17), sources and types of data shared with practice**																		
B17a_a	Local hospitals outside of health care system																		
	Read-only data	31.7	24.6	25.6	30.3	20.0	32.3	54.1	29.0	22.2	19.2	8.3	16.1	39.1	23.1	26.0	11.5	51.9	44.9
	Import or exchange data	32.0	39.8	23.9	33.5	5.7	12.9	29.7	29.0	25.9	15.4	16.7	25.0	56.3	76.9	46.0	57.7	28.9	26.5
	None	30.2	33.8	42.4	30.4	74.3	54.8	13.5	39.5	48.2	65.4	45.0	57.1	4.7	0.0	28.0	25.0	19.2	26.5
	Don't know	6.2	1.9	8.1	5.8	0.0	0.0	2.7	2.6	3.7	0.0	30.0	1.8	0.0	0.0	0.0	5.8	0.0	2.0
	N	325	317	164	154	35	31	37	38	27	26	60	56	64	65	50	52	52	49
B17a_b	Other local medical care outside of health care system																		
	Read-only data	18.9	14.7	24.1	15.0	8.6	16.1	29.7	7.9	3.7	11.5	5.0	17.9	23.4	12.5	20.8	3.9	35.3	30.6
	Import or exchange data	28.0	34.5	20.9	37.5	2.9	19.4	27.0	29.0	14.8	19.2	16.7	26.8	43.8	55.4	43.8	54.9	31.4	20.4
	None	46.0	47.9	46.0	41.9	88.6	64.5	40.5	60.5	77.8	69.2	48.3	53.6	31.3	25.0	33.3	37.3	31.4	46.9
	Don't know	7.1	2.9	9.0	5.7	0.0	0.0	2.7	2.6	3.7	0.0	30.0	1.8	1.6	7.1	2.1	3.9	2.0	2.0
	N	322	307	163	153	35	31	37	38	27	26	60	56	64	56	48	51	51	49
B17a_c	Local diagnostic service facilities (lab or imaging) outside of health care system																		
	Read-only data	12.3	14.5	16.3	16.2	17.1	19.4	5.4	5.3	11.1	15.4	8.3	8.9	10.9	15.4	14.0	11.5	19.2	26.5
	Import or exchange data	47.4	57.4	35.8	44.7	11.4	19.4	37.8	60.5	51.9	73.1	21.7	55.4	81.3	81.5	56.0	57.7	55.8	40.8
	None	33.5	25.2	38.0	36.0	71.4	61.3	54.1	31.6	33.3	11.5	40.0	32.1	6.3	3.1	30.0	23.1	23.1	28.6
	Don't know	6.8	2.8	10.0	3.1	0.0	0.0	2.7	2.6	3.7	0.0	30.0	3.6	1.6	0.0	0.0	7.7	1.9	4.1
	N	325	317	165	152	35	31	37	38	27	26	60	56	64	65	50	52	52	49

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region													
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B17a_d	Local hospitals in health care system																		
	Read-only data	24.1	22.2	22.9	21.4	57.1	45.2	10.8	5.3	18.5	38.5	33.9	32.1	3.4	7.8	19.6	23.1	31.4	18.4
	Import or exchange data	50.8	55.1	43.9	58.2	17.1	35.5	64.9	71.1	29.6	30.8	18.6	41.1	89.8	60.9	76.5	71.2	41.2	59.2
	None	17.6	21.8	26.0	15.7	25.7	19.4	24.3	23.7	48.2	30.8	17.0	23.2	0.0	31.3	2.0	5.8	27.5	20.4
	Don't know	7.5	1.0	7.1	4.8	0.0	0.0	0.0	0.0	3.7	0.0	30.5	3.6	6.8	0.0	2.0	0.0	0.0	2.0
	N	319	316	162	153	35	31	37	38	27	26	59	56	59	64	51	52	51	49
B17a_e	Local medical care practices in health care system																		
	Read-only data	15.0	21.8	27.0	16.0	8.6	25.8	16.2	0.0	14.8	19.2	20.0	30.4	4.7	6.2	17.7	52.9	23.1	16.3
	Import or exchange data	69.0	71.2	48.4	67.4	62.9	58.1	78.4	97.4	74.1	61.5	33.3	60.7	93.8	92.3	78.4	43.1	65.4	77.6
	None	10.1	6.3	19.4	12.0	28.6	16.1	5.4	2.6	7.4	19.2	16.7	7.1	1.6	1.5	3.9	3.9	11.5	4.1
	Don't know	5.8	0.6	5.3	4.7	0.0	0.0	0.0	0.0	3.7	0.0	30.0	1.8	0.0	0.0	0.0	0.0	0.0	2.0
	N	326	316	163	151	35	31	37	38	27	26	60	56	64	65	51	51	52	49
B17a_f	Local diagnostic service facilities (lab or imaging) in health care system																		
	Read-only data	15.3	20.2	22.3	21.4	11.4	29.0	13.5	2.6	7.4	15.4	20.0	16.1	3.1	6.2	23.5	53.9	25.0	18.4
	Import or exchange data	71.0	73.2	58.1	63.1	68.6	61.3	83.8	94.7	85.2	76.9	31.7	66.1	96.9	92.3	74.5	42.3	65.4	77.6
	None	8.0	5.1	14.4	13.2	20.0	9.7	2.7	0.0	3.7	7.7	18.3	14.3	0.0	1.5	2.0	1.9	9.6	2.0
	Don't know	5.8	1.6	5.3	2.3	0.0	0.0	0.0	2.6	3.7	0.0	30.0	3.6	0.0	0.0	0.0	1.9	0.0	2.0
	N	327	317	162	154	35	31	37	38	27	26	60	56	65	65	51	52	52	49
B17b	**Among practice sites that use an EHR and are *not in a health care system or group* (from B17), sources and types of data shared with practice**																		
B17b_a	Local hospitals																		
	Read-only data	41.6	50.0	18.9	21.5	41.9	68.6	41.2	29.4	39.0	51.2	42.9	52.9	22.2	44.4	45.5	36.4	57.1	58.8
	Import or exchange data	33.1	36.6	40.6	47.7	25.8	17.1	44.1	58.8	24.4	31.7	7.1	29.4	77.8	55.6	45.5	45.5	35.7	35.3
	None	25.3	12.2	39.7	26.9	32.3	11.4	14.7	11.8	36.6	17.1	50.0	17.7	0.0	0.0	9.1	9.1	7.1	5.9
	Don't know	0.0	1.2	0.8	4.0	0.0	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0
	N	154	164	149	150	31	35	34	34	41	41	14	17	9	9	11	11	14	17
B17b_b	Other local medical care practices																		
	Read-only data	19.1	16.1	3.5	15.3	13.3	8.8	29.4	23.5	14.6	7.5	21.4	5.9	44.4	22.2	9.1	18.2	7.7	41.2
	Import or exchange data	21.1	29.0	37.1	36.8	20.0	14.7	20.6	41.2	4.9	30.0	21.4	41.2	33.3	22.2	54.6	9.1	38.5	35.3
	None	58.6	53.1	55.8	43.8	66.7	73.5	47.1	35.3	80.5	62.5	57.1	52.9	22.2	55.6	27.3	63.6	53.9	17.7
	Don't know	1.3	1.9	3.7	4.1	0.0	2.9	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	9.1	0.0	5.9
	N	152	162	142	146	30	34	34	34	41	40	14	17	9	9	11	11	13	17

Table A.5. (*continued*)

Question		CPC-wide				CPC practices by region											
		CPC		Comparison		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B17b_c	Local diagnostic service facilities (for example, lab or imaging)																		
	Read-only data	16.9	22.6	10.1	16.1	29.0	25.7	11.8	26.5	17.1	17.5	14.3	11.1	11.1	0.0	27.3	36.4	0.0	35.3
	Import or exchange data	61.0	62.2	60.8	52.1	38.7	51.4	70.6	61.8	58.5	75.0	50.0	50.0	88.9	88.9	63.6	45.5	85.7	64.7
	None	20.8	14.0	28.3	27.6	32.3	20.0	14.7	11.8	24.4	7.5	28.6	38.9	0.0	11.1	9.1	9.1	14.3	0.0
	Don't know	1.3	1.2	0.8	4.2	0.0	2.9	2.9	0.0	0.0	0.0	7.1	0.0	0.0	0.0	0.0	9.1	0.0	0.0
	N	154	164	146	149	31	35	34	34	41	40	14	18	9	9	11	11	14	17

Sources: CPC practice surveys administered April through July 2014, and April through August 2015.

Notes: Question numbers pertain to the 2015 CPC practice survey.

[a] The comparison sample in 2014 is large relative to 2015 because this question was included on the shortened version of the survey administered to comparison practices only in 2014.

[b] We created a composite measure of ACO participation using the responses to three survey questions: B4, which asked CPC and comparison practices whether the practice was affiliated with an accountable care organization; B10c, which asked comparison practices whether the practice participated in the Medicare Shared Savings Program; and B10e, which asked comparison practices whether the practice participated in the Pioneer ACO program. Because CPC practices cannot participate in Medicare ACOs as a condition of being in the initiative, those two questions were not asked to CPC practices. We coded CPC practices as being in an ACO if they answered yes to B4 and coded comparison practices as being in an ACO if they answered yes to any one of the three questions. For both CPC and comparison practices, we coded missing responses the same as those stating the practices were not in an ACO.

n.a. = not applicable, because the question or response option was not asked in the given survey; HMO = health maintenance organization; ACO = accountable care organization; PA = physician assistant; NP = nurse practitioner; RN = registered nurse; LPN = licensed practical nurse; LVN = licensed vocational nurse; MA = medical assistant; QI = quality improvement; EHR = electronic health record, MD = medical doctor; DO = doctor of osteopathic medicine; NPI = National Provider Identifier.

Table A.6. CPC practice assessment of learning activities and assistance provided by regional learning faculty in 2014 and 2015, overall and by region (percentage of practices unless specified)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Experience with technical assistance from regional learning faculty (RLF)																	
C1	RLF communicates with																
	Staff in practice site only	41.1	37.5	77.8	65.0	54.2	47.1	79.1	63.6	20.8	25.0	12.0	13.5	25.8	27.4	22.7	26.2
	Staff in larger health care system or medical group only	11.7	14.7	4.8	3.3	1.4	11.4	7.5	9.1	43.1	8.3	9.3	12.2	4.8	29.0	9.1	30.8
	A combination	47.0	46.7	17.5	30.0	44.4	41.4	13.4	25.8	34.7	66.7	78.7	74.3	69.4	43.6	68.2	38.5
	Neither	0.2	1.1	0.0	1.7	0.0	0.0	0.0	1.5	1.4	0.0	0.0	0.0	0.0	0.0	0.0	4.6
	N	477	469	63	60	72	70	67	66	72	72	75	74	62	62	66	65
C2	Frequency of communication between practice and RLF																
	Daily	2.1	0.9	1.6	3.3	4.2	1.4	3.0	1.5	0.0	0.0	2.7	0.0	1.6	0.0	1.5	0.0
	Weekly	37.3	26.2	22.2	26.7	50.0	38.6	26.9	15.2	31.9	19.2	56.0	57.3	48.4	6.5	22.7	13.6
	Monthly	45.1	50.8	69.8	46.7	43.1	58.6	55.2	68.2	52.8	50.7	30.7	16.0	27.4	74.2	37.9	45.8
	Less than monthly	14.1	21.3	6.4	23.3	1.4	1.4	14.9	15.2	12.5	28.8	9.3	26.7	21.0	17.7	34.9	37.3
	Never	1.5	0.9	0.0	0.0	1.4	0.0	0.0	0.0	2.8	1.4	1.3	0.0	1.6	1.6	3.0	3.4
	N	477	465	63	60	72	70	67	66	72	73	75	75	62	62	66	59
C3	*Number of times* direct support provided by RLF to practice in past six months																
	Mean	10.3	7.3	9.4	7.1	21.6	17.1	10.1	8.1	9.6	4.0	4.5	4.6	10.5	4.9	5.7	4.0
	Median	6	5	7	4	15	14.5	6	6	3.5	3	2	2	6	3	3	3
	Min	0	0	0	0	6	2	0	1	0	0	0	0	0	0	0	0
	Max	100	100	40	60	100	100	60	50	50	18	30	25	75	18	50	12
	N	463	456	62	60	71	70	67	66	70	72	71	75	58	61	64	52
C4	Practice rating of RLF in six regions/NJ AFP in meeting practice's CPC-related needs																
	Excellent	38.0	37.0	41.9	33.9	63.4	54.3	61.2	62.1	21.4	25.0	32.4	38.7	17.2	21.3	25.0	17.7
	Very good	33.9	34.8	27.4	35.6	28.2	28.6	19.4	24.2	35.7	37.5	46.5	46.7	43.1	21.3	37.5	51.0
	Good	20.5	22.7	29.0	23.7	7.0	12.9	17.9	10.6	30.0	33.3	15.5	13.3	25.9	47.5	20.3	19.6
	Fair	5.8	4.9	1.6	6.8	1.4	2.9	1.5	3.0	11.4	2.8	4.2	1.3	6.9	8.2	14.1	11.8
	Poor	1.7	0.7	0.0	0.0	0.0	1.4	0.0	0.0	1.4	1.4	1.4	0.0	6.9	1.6	3.1	0.0
	N	463	454	62	59	71	70	67	66	70	72	71	75	58	61	64	51
C4a	Practice rating of TransforMed in meeting practice's CPC-related needs (for NJ only)																
	Excellent	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	40.3	26.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Very good	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	26.9	41.5	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Good	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	14.9	23.1	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Fair	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	16.4	9.2	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Poor	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	1.5	0.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	N	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	67	65	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
C5a_a	Practice rating of usefulness of practice-to-practice learning																
	Very useful	n.a.	32.5	n.a.	34.5	n.a.	28.6	n.a.	36.9	n.a.	19.2	n.a.	33.8	n.a.	48.4	n.a.	28.1
	Somewhat useful	n.a.	47.7	n.a.	43.1	n.a.	57.1	n.a.	40.0	n.a.	50.7	n.a.	55.4	n.a.	38.7	n.a.	45.6
	Not very useful	n.a.	5.0	n.a.	6.9	n.a.	1.4	n.a.	9.2	n.a.	8.2	n.a.	0.0	n.a.	4.8	n.a.	5.3
	Not at all useful	n.a.	0.7	n.a.	0.0	n.a.	1.4	n.a.	1.5	n.a.	0.0	n.a.	0.0	n.a.	1.6	n.a.	0.0
	Never received or attended	n.a.	14.2	n.a.	15.5	n.a.	11.4	n.a.	12.3	n.a.	21.9	n.a.	10.8	n.a.	6.5	n.a.	21.1
	N	n.a.	459	n.a.	58	n.a.	70	n.a.	65	n.a.	73	n.a.	74	n.a.	62	n.a.	57
C5a_b	Practice rating of usefulness of in-person coaching at this practice																
	Very useful	n.a.	24.5	n.a.	31.7	n.a.	54.3	n.a.	23.1	n.a.	16.4	n.a.	13.5	n.a.	11.3	n.a.	21.0
	Somewhat useful	n.a.	29.6	n.a.	23.3	n.a.	24.3	n.a.	21.5	n.a.	27.4	n.a.	28.4	n.a.	46.8	n.a.	37.1
	Not very useful	n.a.	3.9	n.a.	0.0	n.a.	4.3	n.a.	3.1	n.a.	5.5	n.a.	4.1	n.a.	8.1	n.a.	1.6
	Not at all useful	n.a.	1.9	n.a.	1.7	n.a.	2.9	n.a.	1.5	n.a.	0.0	n.a.	2.7	n.a.	1.6	n.a.	3.2
	Never received or attended	n.a.	40.1	n.a.	43.3	n.a.	14.3	n.a.	50.8	n.a.	50.7	n.a.	51.4	n.a.	32.3	n.a.	37.1
	N	n.a.	466	n.a.	60	n.a.	70	n.a.	65	n.a.	73	n.a.	74	n.a.	62	n.a.	62
C5a_c	Practice rating of usefulness of webinars																
	Very useful	n.a.	20.7	n.a.	29.3	n.a.	11.4	n.a.	34.9	n.a.	20.6	n.a.	14.7	n.a.	16.1	n.a.	20.3
	Somewhat useful	n.a.	68.8	n.a.	53.5	n.a.	80.0	n.a.	54.6	n.a.	71.2	n.a.	76.0	n.a.	75.8	n.a.	67.2
	Not very useful	n.a.	9.4	n.a.	17.2	n.a.	8.6	n.a.	7.6	n.a.	8.2	n.a.	8.0	n.a.	4.8	n.a.	12.5
	Not at all useful	n.a.	0.9	n.a.	0.0	n.a.	0.0	n.a.	3.0	n.a.	0.0	n.a.	1.3	n.a.	1.6	n.a.	0.0
	Never received or attended	n.a.	0.2	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	1.6	n.a.	0.0
	N	n.a.	468	n.a.	58	n.a.	70	n.a.	66	n.a.	73	n.a.	75	n.a.	62	n.a.	64
C5a_d	Practice rating of usefulness of CPC weekly round-up email																
	Very useful	n.a.	39.1	n.a.	50.0	n.a.	38.6	n.a.	62.1	n.a.	38.4	n.a.	28.4	n.a.	30.7	n.a.	27.0
	Somewhat useful	n.a.	49.8	n.a.	45.0	n.a.	50.0	n.a.	34.9	n.a.	45.2	n.a.	51.4	n.a.	51.6	n.a.	71.4
	Not very useful	n.a.	9.0	n.a.	5.0	n.a.	11.4	n.a.	3.0	n.a.	11.0	n.a.	18.9	n.a.	9.7	n.a.	1.6
	Not at all useful	n.a.	1.3	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	1.4	n.a.	1.4	n.a.	6.5	n.a.	0.0
	Never received or attended	n.a.	0.9	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	4.1	n.a.	0.0	n.a.	1.6	n.a.	0.0
	N	n.a.	468	n.a.	60	n.a.	70	n.a.	66	n.a.	73	n.a.	74	n.a.	62	n.a.	63
C5a_e	Practice rating of usefulness of in-person meetings for practices and others in CPC																
	Very useful	n.a.	37.9	n.a.	39.7	n.a.	51.4	n.a.	21.2	n.a.	24.7	n.a.	33.3	n.a.	61.3	n.a.	36.5
	Somewhat useful	n.a.	49.6	n.a.	39.7	n.a.	40.0	n.a.	62.1	n.a.	57.5	n.a.	61.1	n.a.	30.7	n.a.	52.4
	Not very useful	n.a.	4.1	n.a.	8.6	n.a.	1.4	n.a.	9.1	n.a.	5.5	n.a.	1.4	n.a.	0.0	n.a.	3.2
	Not at all useful	n.a.	1.3	n.a.	0.0	n.a.	1.4	n.a.	1.5	n.a.	1.4	n.a.	0.0	n.a.	1.6	n.a.	3.2
	Never received or attended	n.a.	7.1	n.a.	12.1	n.a.	5.7	n.a.	6.1	n.a.	11.0	n.a.	4.2	n.a.	6.5	n.a.	4.8
	N	n.a.	464	n.a.	58	n.a.	70	n.a.	66	n.a.	73	n.a.	72	n.a.	62	n.a.	63

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
C5a_f	Practice rating of usefulness of CPC Collaboration Website																
	Very useful	n.a.	23.7	n.a.	28.3	n.a.	15.7	n.a.	23.1	n.a.	27.4	n.a.	35.6	n.a.	21.3	n.a.	12.7
	Somewhat useful	n.a.	49.9	n.a.	58.3	n.a.	41.4	n.a.	56.9	n.a.	52.1	n.a.	48.0	n.a.	31.2	n.a.	61.9
	Not very useful	n.a.	21.1	n.a.	10.0	n.a.	34.3	n.a.	15.4	n.a.	16.4	n.a.	8.2	n.a.	42.6	n.a.	22.2
	Not at all useful	n.a.	4.1	n.a.	1.7	n.a.	8.6	n.a.	3.1	n.a.	1.4	n.a.	5.5	n.a.	4.9	n.a.	3.2
	Never received or attended	n.a.	1.3	n.a.	1.7	n.a.	0.0	n.a.	1.5	n.a.	2.7	n.a.	2.7	n.a.	0.0	n.a.	0.0
	N	n.a.	465	n.a.	60	n.a.	70	n.a.	65	n.a.	73	n.a.	73	n.a.	61	n.a.	63
C5a_g	Practice rating of usefulness of CPC Web Application																
	Very useful	n.a.	30.2	n.a.	43.3	n.a.	17.1	n.a.	48.5	n.a.	30.1	n.a.	24.7	n.a.	27.4	n.a.	22.2
	Somewhat useful	n.a.	57.6	n.a.	50.0	n.a.	65.7	n.a.	47.0	n.a.	58.9	n.a.	58.9	n.a.	56.5	n.a.	65.1
	Not very useful	n.a.	7.5	n.a.	6.7	n.a.	17.1	n.a.	3.0	n.a.	2.7	n.a.	5.5	n.a.	8.1	n.a.	9.5
	Not at all useful	n.a.	2.8	n.a.	0.0	n.a.	0.0	n.a.	1.5	n.a.	1.4	n.a.	5.5	n.a.	8.1	n.a.	3.2
	Never received or attended	n.a.	1.9	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	6.9	n.a.	5.5	n.a.	0.0	n.a.	0.0
	N	n.a.	467	n.a.	60	n.a.	70	n.a.	66	n.a.	73	n.a.	73	n.a.	62	n.a.	63
C5b_a	Practice rating of usefulness of action group webinar on behavioral health integration																
	Very useful	n.a.	10.6	n.a.	8.8	n.a.	14.7	n.a.	12.7	n.a.	4.4	n.a.	10.2	n.a.	6.9	n.a.	16.7
	Somewhat useful	n.a.	42.3	n.a.	21.1	n.a.	51.5	n.a.	44.4	n.a.	35.3	n.a.	57.6	n.a.	27.6	n.a.	56.7
	Not very useful	n.a.	8.3	n.a.	12.3	n.a.	16.2	n.a.	3.2	n.a.	5.9	n.a.	8.5	n.a.	6.9	n.a.	5.0
	Not at all useful	n.a.	0.7	n.a.	1.8	n.a.	0.0	n.a.	1.6	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	1.7
	Never received or attended	n.a.	38.1	n.a.	56.1	n.a.	17.7	n.a.	38.1	n.a.	54.4	n.a.	23.7	n.a.	58.6	n.a.	20.0
	N	n.a.	433	n.a.	57	n.a.	68	n.a.	63	n.a.	68	n.a.	59	n.a.	58	n.a.	60
C5b_b	Practice rating of usefulness of action group webinar on medication management																
	Very useful	n.a.	19.6	n.a.	19.6	n.a.	18.2	n.a.	19.7	n.a.	21.5	n.a.	8.5	n.a.	32.8	n.a.	17.0
	Somewhat useful	n.a.	35.6	n.a.	25.0	n.a.	39.4	n.a.	27.9	n.a.	29.2	n.a.	67.8	n.a.	31.0	n.a.	28.8
	Not very useful	n.a.	2.4	n.a.	3.6	n.a.	0.0	n.a.	1.6	n.a.	0.0	n.a.	3.4	n.a.	1.7	n.a.	6.8
	Not at all useful	n.a.	1.2	n.a.	3.6	n.a.	0.0	n.a.	0.0	n.a.	3.1	n.a.	0.0	n.a.	0.0	n.a.	1.7
	Never received or attended	n.a.	41.3	n.a.	48.2	n.a.	42.4	n.a.	50.8	n.a.	46.2	n.a.	20.3	n.a.	34.5	n.a.	45.8
	N	n.a.	424	n.a.	56	n.a.	66	n.a.	61	n.a.	65	n.a.	59	n.a.	58	n.a.	59
C5b_c	Practice rating of usefulness of action group webinar on self-management support																
	Very useful	n.a.	25.4	n.a.	21.1	n.a.	21.9	n.a.	29.5	n.a.	26.6	n.a.	17.8	n.a.	43.9	n.a.	19.0
	Somewhat useful	n.a.	51.8	n.a.	47.4	n.a.	51.6	n.a.	50.8	n.a.	53.1	n.a.	75.3	n.a.	29.8	n.a.	48.3
	Not very useful	n.a.	4.4	n.a.	7.0	n.a.	3.1	n.a.	4.9	n.a.	3.1	n.a.	4.1	n.a.	3.5	n.a.	5.2
	Not at all useful	n.a.	0.2	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	1.8	n.a.	0.0
	Never received or attended	n.a.	18.2	n.a.	24.6	n.a.	23.4	n.a.	14.8	n.a.	17.2	n.a.	2.7	n.a.	21.1	n.a.	27.6
	N	n.a.	434	n.a.	57	n.a.	64	n.a.	61	n.a.	64	n.a.	73	n.a.	57	n.a.	58

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
C5b_d	Practice rating of usefulness of action group webinar on access to care outside of office visits																
	Very useful	n.a.	12.7	n.a.	16.7	n.a.	10.6	n.a.	11.9	n.a.	18.2	n.a.	13.6	n.a.	8.8	n.a.	8.6
	Somewhat useful	n.a.	34.4	n.a.	13.0	n.a.	51.5	n.a.	30.5	n.a.	37.9	n.a.	55.9	n.a.	21.1	n.a.	25.9
	Not very useful	n.a.	4.5	n.a.	9.3	n.a.	7.6	n.a.	1.7	n.a.	3.0	n.a.	5.1	n.a.	1.8	n.a.	3.5
	Not at all useful	n.a.	0.7	n.a.	0.0	n.a.	0.0	n.a.	1.7	n.a.	0.0	n.a.	0.0	n.a.	3.5	n.a.	0.0
	Never received or attended	n.a.	47.7	n.a.	61.1	n.a.	30.3	n.a.	54.2	n.a.	40.9	n.a.	25.4	n.a.	64.9	n.a.	62.1
	N	n.a.	419	n.a.	54	n.a.	66	n.a.	59	n.a.	66	n.a.	59	n.a.	57	n.a.	58
C5b_e	Practice rating of usefulness of action group webinar on patient and family engagement																
	Very useful	n.a.	19.2	n.a.	17.5	n.a.	24.6	n.a.	26.2	n.a.	22.7	n.a.	12.1	n.a.	10.7	n.a.	19.0
	Somewhat useful	n.a.	34.4	n.a.	31.6	n.a.	35.4	n.a.	21.3	n.a.	30.3	n.a.	58.6	n.a.	21.4	n.a.	43.1
	Not very useful	n.a.	5.7	n.a.	1.8	n.a.	20.0	n.a.	0.0	n.a.	4.6	n.a.	3.5	n.a.	1.8	n.a.	6.9
	Not at all useful	n.a.	0.2	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	1.8	n.a.	0.0
	Never received or attended	n.a.	40.4	n.a.	49.1	n.a.	20.0	n.a.	52.5	n.a.	42.4	n.a.	25.9	n.a.	64.3	n.a.	31.0
	N	n.a.	421	n.a.	57	n.a.	65	n.a.	61	n.a.	66	n.a.	58	n.a.	56	n.a.	58
C5b_f	Practice rating of usefulness of action group webinar on use of care compacts to coordinate care																
	Very useful	n.a.	12.7	n.a.	8.9	n.a.	23.1	n.a.	15.3	n.a.	11.8	n.a.	14.0	n.a.	5.6	n.a.	8.6
	Somewhat useful	n.a.	26.6	n.a.	12.5	n.a.	29.2	n.a.	22.0	n.a.	27.9	n.a.	43.9	n.a.	16.7	n.a.	32.8
	Not very useful	n.a.	7.9	n.a.	7.1	n.a.	10.8	n.a.	1.7	n.a.	5.9	n.a.	10.5	n.a.	5.6	n.a.	13.8
	Not at all useful	n.a.	0.7	n.a.	0.0	n.a.	1.5	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	3.7	n.a.	0.0
	Never received or attended	n.a.	52.0	n.a.	71.4	n.a.	35.4	n.a.	61.0	n.a.	54.4	n.a.	31.6	n.a.	68.5	n.a.	44.8
	N	n.a.	417	n.a.	56	n.a.	65	n.a.	59	n.a.	68	n.a.	57	n.a.	54	n.a.	58
C5b_g	Practice rating of usefulness of action group webinar on use of decision aids in shared decision making																
	Very useful	n.a.	21.3	n.a.	21.4	n.a.	21.5	n.a.	29.0	n.a.	19.4	n.a.	13.1	n.a.	23.2	n.a.	21.3
	Somewhat useful	n.a.	48.8	n.a.	39.3	n.a.	50.8	n.a.	53.2	n.a.	38.8	n.a.	68.9	n.a.	48.2	n.a.	42.6
	Not very useful	n.a.	6.3	n.a.	5.4	n.a.	13.9	n.a.	3.2	n.a.	3.0	n.a.	4.9	n.a.	3.6	n.a.	9.8
	Not at all useful	n.a.	0.7	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	3.6	n.a.	1.6
	Never received or attended	n.a.	22.9	n.a.	33.9	n.a.	13.9	n.a.	14.5	n.a.	38.8	n.a.	13.1	n.a.	21.4	n.a.	24.6
	N	n.a.	428	n.a.	56	n.a.	65	n.a.	62	n.a.	67	n.a.	61	n.a.	56	n.a.	61
C9	CPC Support provides timely resolution to our practice's operational questions																
	Strongly disagree	3.0	7.4	0.0	1.7	5.6	10.0	3.0	10.6	1.4	2.7	2.7	16.0	1.7	3.2	6.1	5.3
	Disagree	3.0	2.0	1.6	1.7	2.8	1.4	3.0	0.0	0.0	0.0	4.1	0.0	5.0	1.6	4.6	10.5
	Agree	46.0	37.2	47.6	42.4	36.6	42.9	35.8	16.7	41.7	52.1	54.8	24.0	61.7	62.9	45.5	19.3
	Strongly agree	40.5	44.8	47.6	52.5	47.9	40.0	53.7	71.2	48.6	30.1	28.8	48.0	16.7	17.7	37.9	56.1

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	Did not contact CPC Support for operational questions	7.6	8.7	3.2	1.7	7.0	5.7	4.5	1.5	8.3	15.1	9.6	12.0	15.0	14.5	6.1	8.8
	N	472	462	63	59	71	70	67	66	72	73	73	75	60	62	66	57
Experience with technical assistance from CPC payers and others among CPC practices																	
C6	Received learning activities and assistance from other payers participating in CPC																
	At least one payer	73.4	74.7	46.0	53.3	73.6	81.4	80.6	75.8	61.6	79.5	93.2	75.3	86.9	90.3	70.8	63.8
	Percentage of payers from which practice received assistance	26.6	25.3	54.0	46.7	26.4	18.6	19.4	24.2	38.4	20.6	6.9	24.7	13.1	9.7	29.2	36.2
	N	474	462	63	60	72	70	67	66	73	73	73	73	61	62	65	58
C7	If received coaching or assistance, *number of times* in past six months received direct support from other payers participating in CPC (in person, over the phone, or via email)																
	Mean	4.9	4.9	4.1	2.8	5.7	6.9	5.9	4.9	8.3	3.6	2.2	7.3	5.8	3.4	3.3	4.8
	Median	3	3	3	2.5	6	4	5	4	3.5	2	2	2	6	3	2	2
	Min	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Max	25	85	15	6	20	85	25	20	24	15	16	32	15	10	25	24
	N	304	304	28	28	49	40	47	48	32	53	62	52	47	56	39	27
C7a	If received help from other payers participating in CPC in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	22.4	30.5	25.0	17.9	8.2	25.0	40.4	35.4	25.0	35.2	8.1	28.9	40.4	33.9	15.4	29.6
	Somewhat helpful	67.1	55.1	60.7	71.4	77.6	57.5	51.1	56.3	71.9	53.7	80.7	40.4	57.5	60.7	64.1	51.9
	Not very helpful	8.6	12.8	10.7	10.7	12.2	17.5	6.4	8.3	3.1	11.1	8.1	25.0	2.1	3.6	18.0	14.8
	Not at all helpful	2.0	1.6	3.6	0.0	2.0	0.0	2.1	0.0	0.0	0.0	3.2	5.8	0.0	1.8	2.6	3.7
	N	304	305	28	28	49	40	47	48	32	54	62	52	47	56	39	27
C8a_1	If received coaching/assistance from payers or health plans not participating in CPC in the past six months, *number of times*																
	Mean	3.2	2.7	2.0	2.3	2.2	3.1	5.0	3.4	7.2	3.3	2.4	1.2	2.0	2.7	1.8	2.2
	Median	2	2	2	1	2	2	2	4	10	3	2	1	1.5	2.5	1	1.5
	Min	1	1	2	1	1	1	1	1	2	1	1	1	1	1	1	1
	Max	20	12	2	5	6	8	20	6	10	12	8	3	4	5	6	6
	N	79	83	2	3	13	15	7	14	13	22	23	13	4	6	17	10

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
C8a_2	If received coaching/assistance from payers or health plans not participating in CPC in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	12.7	19.5	0.0	33.3	15.4	12.5	14.3	21.4	15.4	25.0	17.4	14.3	25.0	50.0	0.0	0.0
	Somewhat helpful	78.5	73.2	100.0	33.3	84.6	81.3	42.9	64.3	76.9	75.0	78.3	85.7	75.0	50.0	88.2	77.8
	Not very helpful	6.3	7.3	0.0	33.3	0.0	6.3	28.6	14.3	7.7	0.0	4.4	0.0	0.0	0.0	5.9	22.2
	Not at all helpful	2.5	0.0	0.0	0.0	0.0	0.0	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.9	0.0
	N	79	82	2	3	13	16	7	14	13	20	23	14	4	6	17	9
C8b_1	If received coaching/assistance from practice's health care system or medical group in the past six months, *number of times*																
	Mean	20.4	17.6	15.7	6.0	15.9	15.9	26.3	20.0	27.2	7.1	27.8	36.4	17.4	10.8	13.4	12.3
	Median	12	6	12	6	8	6	20	11	16.5	6	15	30	12	6	10	6
	Min	1	1	1	2	1	1	6	2	4	1	1	1	1	1	1	1
	Max	100	100	100	15	100	100	100	99	100	36	100	100	100	100	50	100
	N	233	250	31	26	34	32	23	22	26	32	45	60	43	44	31	34
C8b_2	If received coaching/assistance from practice's health care system or medical group in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	66.8	58.9	69.0	69.2	54.6	38.7	73.9	60.0	88.0	60.6	44.4	49.2	75.0	74.4	77.4	64.7
	Somewhat helpful	31.0	40.7	27.6	30.8	45.5	61.3	13.0	40.0	12.0	39.4	53.3	49.2	25.0	25.6	22.6	35.3
	Not very helpful	1.8	0.4	3.5	0.0	0.0	0.0	8.7	0.0	0.0	0.0	2.2	1.7	0.0	0.0	0.0	0.0
	Not at all helpful	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n.a.	0.4	n.a.	0.0	n.a.	0.0	n.a.	4.4	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.
	N	226	246	29	26	33	31	23	20	25	33	45	59	40	43	31	34
C8c_1	If received coaching/assistance from other local organizations in the past six months (for example, Quality Improvement Organization or medical society), *number of times*																
	Mean	3.7	3.0	3.1	2.8	6.9	3.2	5.1	2.5	2.0	1.6	2.8	3.0	2.0	2.0	3.6	4.6
	Median	2	2	2	3	3	2	3	1	1	1	2	3.5	1	1	2	3
	Min	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Max	40	20	10	10	40	6	18	6	4	3	6	4	6	6	12	20
	N	114	65	21	16	18	11	10	10	3	5	27	4	16	7	19	12

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
C8c_2	If received coaching/assistance from other local organizations in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	44.6	44.8	55.6	75.0	52.9	27.3	50.0	20.0	33.3	28.6	33.3	50.0	56.3	71.4	31.6	33.3
	Somewhat helpful	40.0	55.2	44.4	25.0	47.1	72.7	40.0	80.0	66.7	71.4	14.8	50.0	43.8	28.6	57.9	66.7
	Not very helpful	1.8	0.0	0.0	0.0	0.0	0.0	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0
	Not at all helpful	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.3	0.0
	n.a.	12.7	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	51.9	n.a.	0.0	n.a.	0.0	n.a.
	N	110	67	18	16	17	11	10	10	3	7	27	4	16	7	19	12
C8d_1	If received coaching/assistance from regional extension center in the past six months, *number of times*																
	Mean	6.3	6.0	4.1	2.1	8.1	3.5	4.1	3.6	5.4	3.2	9.5	12.3	3.0	2.0	4.2	6.3
	Median	4	3	3	2	6	3.5	4	3	5	3	3	15	2	2	2	5
	Min	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Max	50	20	15	4	30	6	10	6	12	6	50	20	6	3	15	12
	N	102	62	15	11	10	4	8	5	18	13	31	18	7	3	13	8
C8d_2	If received coaching/assistance from regional extension center in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	41.4	46.8	71.4	60.0	20.0	0.0	42.9	60.0	72.2	53.3	9.7	38.9	57.1	33.3	50.0	57.1
	Somewhat helpful	41.4	48.4	21.4	40.0	70.0	50.0	42.9	40.0	27.8	40.0	48.4	61.1	28.6	66.7	50.0	42.9
	Not very helpful	4.0	4.8	7.1	0.0	10.0	50.0	14.3	0.0	0.0	6.7	0.0	0.0	14.3	0.0	0.0	0.0
	Not at all helpful	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n.a.	13.1	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	0.0	n.a.	41.9	n.a.	0.0	n.a.	0.0	n.a.
	N	99	62	14	10	10	4	7	5	18	15	31	18	7	3	12	7
C8e_1	If received coaching/assistance from other practices outside of practice's health care system or medical group in the past six months, *number of times*																
	Mean	3.9	3.5	3.4	3.4	4.6	3.5	7.4	3.6	4.5	1.0	3.6	5.6	1.2	2.2	4.2	3.6
	Median	2	2	2	2	5.5	2	4	2	5	1	3	5.5	1	2	2	3
	Min	1	1	1	1	1	1	1	1	1	1	1	2	1	1	1	1
	Max	25	25	10	12	10	25	20	10	10	1	6	10	2	4	25	12
	N	118	85	20	19	16	17	15	9	13	4	18	10	23	9	13	17

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
C8e_2	If received coaching/assistance from other practices outside of practice's health care system or medical group in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	48.7	63.8	55.6	66.7	46.7	66.7	53.3	71.4	15.4	50.0	66.7	55.6	57.1	66.7	30.8	61.1
	Somewhat helpful	49.6	35.0	44.4	33.3	46.7	26.7	46.7	28.6	84.6	50.0	27.8	44.4	42.9	33.3	69.2	38.9
	Not very helpful	1.8	1.3	0.0	0.0	6.7	6.7	0.0	0.0	0.0	0.0	5.6	0.0	0.0	0.0	0.0	0.0
	Not at all helpful	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	113	80	18	18	15	15	15	7	13	4	18	9	21	9	13	18
C8f_1	If received coaching/assistance from another source in the past six months, *number of times*																
	Mean	9.2	7.0	3.5	6.5	4.0	11.4	11.0	n.a.	10.5	n.a.	11.0	7.0	3.7	5.0	17.7	3.4
	Median	6	5	3.5	6.5	3	13	11	n.a.	10.5	n.a.	10	10	4	5	8	3
	Min	1	1	1	1	1	2	10	n.a.	1	n.a.	6	1	3	5	1	1
	Max	75	20	6	12	12	20	12	n.a.	20	n.a.	25	10	4	5	75	6
	N	35	23	6	2	5	8	2	n.a.	2	n.a.	11	3	3	1	6	9
C8f_2	If received coaching/assistance from another source in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	60.6	71.4	80.0	50.0	75.0	85.7	100.0	n.a.	100.0	n.a.	18.2	66.7	100.0	100.0	66.7	62.5
	Somewhat helpful	36.4	23.8	20.0	50.0	0.0	14.3	0.0	n.a.	0.0	n.a.	81.8	33.3	0.0	0.0	33.3	25.0
	Not very helpful	3.0	4.8	0.0	0.0	25.0	0.0	0.0	n.a.	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	12.5
	Not at all helpful	0.0	0.0	0.0	0.0	0.0	0.0	0.0	n.a.	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	0.0
	N	33	21	5	2	4	7	2	n.a.	2	n.a.	11	3	3	1	6	8
Experience with technical assistance from payers and others among comparison practices																	
B18a_1	If received coaching/assistance from payers or health plans not participating in CPC in the past six months, *number of times*																
	Mean	6.0	8.1	4.4	8.2	2.9	4.5	6.9	7.3	2.6	11.9	3.4	6.0	16.1	10.7	2.3	11.6
	Median	2	3	2	5	3	2	1	3	3	4	3	3	2	2	2	6
	Min	1	1	1	1	1	1	1	1	2	1	1	1	1	1	1	1
	Max	100	100	20	100	4	50	80	100	3	100	10	75	100	100	6	30
	N	49	127	5	21	5	24	7	17	2	12	10	22	7	11	13	20

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B18a_2	If received coaching/assistance from payers or health plans not participating in CPC in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	15.8	24.3	14.3	33.3	27.3	19.2	0.0	26.3	25.0	18.2	13.3	33.3	33.3	15.4	11.8	15.8
	Somewhat helpful	47.4	51.5	57.1	45.8	27.3	53.9	38.5	42.1	25.0	72.7	53.3	54.2	33.3	61.5	70.6	42.1
	Not very helpful	9.2	17.7	0.0	12.5	9.1	23.1	30.8	10.5	0.0	0.0	0.0	12.5	0.0	15.4	11.8	42.1
	Not at all helpful	5.3	6.6	0.0	8.3	9.1	3.9	0.0	21.1	0.0	9.1	6.7	0.0	22.2	7.7	0.0	0.0
	n.a.	22.4	n.a.	28.6	n.a.	27.3	n.a.	30.8	n.a.	50.0	n.a.	26.7	n.a.	11.1	n.a.	5.9	n.a.
	N	76	136	7	24	11	26	13	19	4	11	15	24	9	13	17	19
B18b_1	If received coaching/assistance from practices health care system or medical group in the past six months, *number of times*																
	Mean	8.1	10.4	4.3	7.6	7.5	4.7	8.3	12.4	1.0	10.4	10.5	18.8	20.7	3.6	3.4	7.8
	Median	4	6	4	6	6	4	3	10	1	4	6	6	2	4	4	5
	Min	1	1	3	1	1	1	1	1	1	2	1	1	1	1	1	1
	Max	100	100	12	12	24	24	100	30	1	100	25	100	100	6	6	45
	N	70	108	9	15	17	14	10	14	3	5	12	26	4	11	15	23
B18b_2	If received coaching/assistance from practice's health care system or medical group in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	42.0	61.2	40.0	62.5	40.0	57.1	40.0	56.3	33.3	50.0	50.0	69.0	80.0	53.9	33.3	62.5
	Somewhat helpful	36.0	33.6	50.0	31.3	28.0	42.9	33.3	31.3	33.3	50.0	27.8	31.0	20.0	46.2	52.4	25.0
	Not very helpful	1.0	3.5	0.0	0.0	0.0	0.0	6.7	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	12.5
	Not at all helpful	1.0	1.7	0.0	6.3	4.0	0.0	0.0	6.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n.a.	20.0	n.a.	10.0	n.a.	28.0	n.a.	20.0	n.a.	33.3	n.a.	22.2	n.a.	0.0	n.a.	14.3	n.a.
	N	100	116	10	16	25	14	15	16	6	4	18	29	5	13	21	24
B18c_1	If received coaching/assistance from other local organizations in the past six months (for example, Quality Improvement Organization or medical society), *number of times*																
	Mean	3.1	4.2	3.2	3.1	8.1	4.6	1.9	4.0	1.0	9.7	3.7	4.5	3.5	3.1	1.4	2.8
	Median	2	3	4	3	6	3	1	5	1	10	2	3	2	4	1	2
	Min	1	1	2	1	1	1	1	1	1	6	1	1	2	1	1	1
	Max	12	100	6	10	12	12	3	5	1	10	10	100	12	4	2	6
	N	29	71	4	10	5	14	4	5	2	2	4	19	3	5	7	16

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B18c_2	If received coaching/assistance from other local organizations in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	20.3	36.3	16.7	33.3	27.3	64.3	16.7	25.0	20.0	50.0	9.1	36.4	33.3	50.0	23.1	12.5
	Somewhat helpful	37.5	55.0	50.0	50.0	27.3	35.7	33.3	50.0	40.0	50.0	27.3	63.6	33.3	50.0	53.9	68.8
	Not very helpful	3.1	5.0	0.0	8.3	9.1	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	0.0	0.0	18.8
	Not at all helpful	0.0	3.8	0.0	8.3	0.0	0.0	0.0	25.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	n.a.	39.1	n.a.	33.3	n.a.	36.4	n.a.	50.0	n.a.	40.0	n.a.	54.6	n.a.	33.3	n.a.	23.1	n.a.
	N	64	80	6	12	11	14	12	8	5	2	11	22	6	6	13	16
B18d_1	If received coaching/assistance from regional extension center in the past six months, *number of times*																
	Mean	1.6	2.6	2.0	n.a.	3.0	2.9	2.5	3.0	5.4	3.2	n.a.	1.3	n.a.	6.0	1.0	n.a.
	Median	2	3	2	n.a.	3	3	2.5	3	5	3	n.a.	1	n.a.	6	1	n.a.
	Min	1	1	1	n.a.	3	1	2	3	1	1	n.a.	1	n.a.	6	1	n.a.
	Max	3	6	3	n.a.	3	6	3	3	12	6	n.a.	3	n.a.	6	1	n.a.
	N	8	12	4	0	1	7	2	1	18	13	0	3	0	1	1	0
B18d_2	If received coaching/assistance from regional extension center in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	13.0	29.4	20.0	0.0	25.0	33.3	10.0	0.0	0.0	n.a.	11.1	33.3	0.0	100.0	9.1	n.a.
	Somewhat helpful	13.0	41.2	20.0	50.0	0.0	44.4	20.0	0.0	0.0	n.a.	11.1	66.7	0.0	0.0	18.2	n.a.
	Not very helpful	2.2	11.8	20.0	0.0	0.0	22.2	0.0	0.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.
	Not at all helpful	4.4	17.7	0.0	50.0	25.0	0.0	0.0	100.0	0.0	n.a.	0.0	0.0	0.0	0.0	0.0	n.a.
	n.a.	67.4	n.a.	40.0	n.a.	50.0	n.a.	70.0	n.a.	100.0	n.a.	77.8	n.a.	100.0	n.a.	72.7	n.a.
	N	46	17	5	2	8	9	10	2	1	0	9	3	2	1	11	0
B18e_1	If received coaching/assistance from other practices outside of practice's healthcare system or medical group in the past six months, *number of times*																
	Mean	2.9	3.3	3.0	3.6	4.7	4.0	3.0	4.4	1.0	2.5	10.0	3.2	2.2	5.1	2.9	1.5
	Median	3	2	3	3	4	2	3	5	1	2	10	4	1	6	3	1
	Min	1	1	3	2	4	2	3	1	1	2	10	1	1	4	2	1
	Max	10	10	3	6	6	6	3	5	1	10	10	6	7	6	3	2
	N	12	25	1	6	2	2	1	2	1	2	1	8	3	2	3	3

Table A.6. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
B18e_2	If received coaching/assistance from other practices outside of practice's healthcare system or medical group in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	14.0	40.7	0.0	42.9	27.3	50.0	0.0	33.3	0.0	50.0	12.5	44.4	33.3	50.0	9.1	0.0
	Somewhat helpful	16.0	40.7	33.3	42.9	0.0	50.0	20.0	0.0	100.0	50.0	0.0	55.6	16.7	50.0	27.3	0.0
	Not very helpful	4.0	3.7	0.0	0.0	9.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.1	50.0
	Not at all helpful	0.0	14.8	0.0	14.3	0.0	0.0	0.0	66.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	50.0
	n.a.	66.0	n.a.	66.7	n.a.	63.6	n.a.	80.0	n.a.	0.0	n.a.	87.5	n.a.	50.0	n.a.	54.6	n.a.
	N	50	27	3	7	11	2	10	3	1	2	8	9	6	2	11	2
B18f_1	If received coaching/assistance from another source in the past six months, *number of times*																
	Mean	5.5	5.9	2.0	9.0	7.3	3.6	n.a.	2.4	n.a.	n.a.	3.0	6.2	n.a.	6.3	3.0	n.a.
	Median	8	8	2	10	8	4	n.a.	2	n.a.	n.a.	3	8	n.a.	10	3	n.a.
	Min	2	1	2	1	2	3	n.a.	2	n.a.	n.a.	3	1	n.a.	2	3	n.a.
	Max	8	10	2	10	8	4	n.a.	3	n.a.	n.a.	3	8	n.a.	10	3	n.a.
	N	5	14	1	3	2	2	0	2	0	0	1	5	0	2	1	0
B18f_2	If received coaching/assistance from another source in the past six months, rating of helpfulness in improving primary care at the practice																
	Very helpful	2.4	61.1	0.0	75.0	0.0	100.0	0.0	0.0	0.0	n.a.	9.1	66.7	0.0	50.0	0.0	n.a.
	Somewhat helpful	12.2	16.7	33.3	0.0	25.0	0.0	0.0	66.7	0.0	n.a.	9.1	0.0	0.0	50.0	10.0	n.a.
	Not very helpful	4.9	5.6	0.0	0.0	12.5	0.0	0.0	0.0	0.0	n.a.	0.0	16.7	0.0	0.0	10.0	n.a.
	Not at all helpful	0.0	16.7	0.0	25.0	0.0	0.0	0.0	33.3	0.0	n.a.	0.0	16.7	0.0	0.0	0.0	n.a.
	n.a.	80.5	n.a.	66.7	n.a.	62.5	n.a.	100.0	n.a.	100.0	n.a.	81.8	n.a.	100.0	n.a.	80.0	n.a.
	N	41	18	3	4	8	3	6	3	2	0	11	6	1	2	10	0

Sources: CPC practice surveys administered April through July 2014, and April through August 2015.

Notes: Question numbers pertain to the 2015 CPC practice survey.

n.a. = not applicable, because the question or response option was not provided in the given survey round.

Table A.7. CPC practices' experience with CPC in 2014 and 2015, overall and by region (percentage of practices)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
Experience with CPC overall																	
D5	Likelihood practice would recommend other practices participate in CPC																
	Very	40.4	53.2	31.8	55.9	44.4	52.9	41.8	54.6	30.1	32.4	53.4	71.6	43.3	45.2	36.9	59.7
	Somewhat	47.8	38.1	55.6	35.6	41.7	41.4	40.3	36.4	50.7	54.9	41.1	25.7	50.0	43.6	56.9	28.1
	Not very	10.2	6.5	11.1	6.8	9.7	4.3	16.4	7.6	17.8	9.9	5.5	1.4	6.7	4.8	3.1	12.3
	Not at all	1.7	2.2	1.6	1.7	4.2	1.4	1.5	1.5	1.4	2.8	0.0	1.4	0.0	6.5	3.1	0.0
	N	473	459	63	59	72	70	67	66	73	71	73	74	60	62	65	57
D6	Level of improvement in practice's quality of care as result of participation in CPC																
	A lot	45.3	53.9	44.4	43.3	45.8	57.1	53.7	60.6	31.5	26.4	57.3	65.3	49.2	62.9	34.9	63.2
	Somewhat	47.2	43.5	46.0	48.3	44.4	41.4	40.3	36.4	56.2	70.8	41.3	34.7	42.6	35.5	59.1	35.1
	Not very much	6.5	2.0	4.8	6.7	8.3	1.4	6.0	3.0	11.0	1.4	1.3	0.0	8.2	0.0	6.1	1.8
	Not at all	1.1	0.7	4.8	1.7	1.4	0.0	0.0	0.0	1.4	1.4	0.0	0.0	0.0	1.6	0.0	0.0
	N	477	462	63	60	72	70	67	66	73	72	75	75	61	62	66	57
Importance of CPC functions in improving patient care																	
D7a	Providing round-the-clock access to care																
	Very important	74.9	83.8	48.4	75.0	83.3	82.9	80.6	81.8	78.1	76.7	69.9	88.0	80.3	93.6	81.8	89.5
	Somewhat important	21.7	13.4	40.3	20.0	12.5	12.9	14.9	12.1	21.9	23.3	28.8	10.7	18.0	6.5	16.7	7.0
	Not very important	2.5	1.9	9.7	5.0	1.4	1.4	3.0	6.1	0.0	0.0	1.4	0.0	1.6	0.0	1.5	1.8
	Not at all important	0.8	0.9	1.6	0.0	2.8	2.9	1.5	0.0	0.0	0.0	0.0	1.3	0.0	0.0	0.0	1.8
	N	474	463	62	60	72	70	67	66	73	73	73	75	61	62	66	57
D7b	Providing continuity of care																
	Very important	92.2	89.2	87.3	83.3	91.7	85.7	90.9	89.4	91.8	86.1	98.6	92.0	91.8	100.0	92.4	87.7
	Somewhat important	7.0	8.9	12.7	16.7	6.9	11.4	6.1	3.0	8.2	13.9	1.4	8.0	6.6	0.0	7.6	8.8
	Not very important	0.6	1.5	0.0	0.0	1.4	1.4	1.5	6.1	0.0	0.0	0.0	0.0	1.6	0.0	0.0	3.5
	Not at all important	0.2	0.4	0.0	0.0	0.0	1.4	1.5	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	474	462	63	60	72	70	66	66	73	72	73	75	61	62	66	57
D7c	Planning for patients' chronic care needs																
	Very important	90.4	88.0	87.3	80.0	93.0	90.0	87.7	81.5	91.8	83.3	97.2	96.0	88.3	93.6	86.2	91.2
	Somewhat important	9.2	11.1	12.7	20.0	7.0	7.1	9.2	16.9	8.2	16.7	2.8	4.1	11.7	6.5	13.9	7.0
	Not very important	0.4	0.9	0.0	0.0	0.0	2.9	3.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
	Not at all important	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	469	460	63	60	71	70	65	65	73	72	72	74	60	62	65	57
D7d	Planning for patients' preventive care needs																
	Very important	86.7	82.0	84.1	75.0	85.9	80.0	87.9	83.3	90.4	69.9	84.9	89.2	88.5	91.9	84.9	86.0
	Somewhat important	12.3	17.1	15.9	25.0	12.7	18.6	7.6	15.2	9.6	30.1	13.7	10.8	11.5	8.1	15.2	10.5
	Not very important	0.9	0.9	0.0	0.0	1.4	1.4	3.0	1.5	0.0	0.0	1.4	0.0	0.0	0.0	0.0	3.5

Table A.7. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	Not at all important	0.2	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	473	462	63	60	71	70	66	66	73	73	73	74	61	62	66	57
D7e	Stratifying patients by risk level																
	Very important	56.8	56.8	61.9	51.7	47.2	55.7	53.7	63.6	56.9	53.4	49.3	49.3	83.6	83.9	48.5	40.4
	Somewhat important	38.0	38.4	30.2	43.3	48.6	38.6	38.8	25.8	33.3	43.8	49.3	49.3	14.8	12.9	47.0	54.4
	Not very important	4.9	4.3	6.4	5.0	4.2	2.9	7.5	10.6	8.3	2.7	1.4	1.3	1.6	3.2	4.6	5.3
	Not at all important	0.4	0.4	1.6	0.0	0.0	2.9	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	474	463	63	60	72	70	67	66	72	73	73	75	61	62	66	57
D7f	Providing risk-based care management services																
	Very important	67.2	68.6	55.6	55.9	53.5	77.1	67.2	72.7	72.6	59.7	80.8	66.7	74.6	82.3	65.2	64.9
	Somewhat important	30.3	28.6	39.7	40.7	46.5	18.6	26.9	21.2	24.7	40.3	19.2	32.0	23.7	16.1	31.8	31.6
	Not very important	2.1	2.6	3.2	3.4	0.0	2.9	6.0	6.1	1.4	0.0	0.0	1.3	1.7	1.6	3.0	3.5
	Not at all important	0.4	0.2	1.6	0.0	0.0	1.4	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	472	461	63	59	71	70	67	66	73	72	73	75	59	62	66	57
D7g	Providing behavioral health services integrated within primary care																
	Very important	53.2	55.5	34.9	38.3	45.1	62.9	51.5	58.1	67.1	41.7	42.5	58.0	55.7	56.5	75.4	75.4
	Somewhat important	38.8	37.2	49.2	46.7	50.7	31.4	33.3	30.7	28.8	55.6	53.4	36.2	32.8	35.5	21.5	21.1
	Not very important	6.1	6.0	12.7	15.0	1.4	2.9	12.1	8.1	2.7	2.8	4.1	4.4	9.8	6.5	1.5	3.5
	Not at all important	1.9	1.3	3.2	0.0	2.8	2.9	3.0	3.2	1.4	0.0	0.0	1.5	1.6	1.6	1.5	0.0
	N	472	452	63	60	71	70	66	62	73	72	73	69	61	62	65	57
D7h	Providing medication management to high-risk patients																
	Very important	77.3	74.4	81.0	68.3	61.1	55.7	79.1	74.2	76.4	70.0	84.9	88.6	76.7	88.5	83.1	76.8
	Somewhat important	20.1	21.6	17.5	28.3	34.7	37.1	13.4	16.7	23.6	28.6	15.1	11.4	21.7	9.8	13.9	17.9
	Not very important	1.7	3.1	1.6	3.3	1.4	2.9	6.0	9.1	0.0	1.4	0.0	0.0	1.7	1.6	1.5	3.6
	Not at all important	0.9	0.9	0.0	0.0	2.8	4.3	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5	1.8
	N	472	453	63	60	72	70	67	66	72	70	73	70	60	61	65	56
D7i	Engaging patients and their families in their care																
	Very important	67.0	71.3	54.1	67.8	50.7	56.5	74.6	74.2	72.6	58.9	80.8	85.3	62.3	86.9	71.2	70.2
	Somewhat important	30.7	25.4	45.9	27.1	46.5	36.2	19.4	21.2	26.0	41.1	17.8	13.3	36.1	11.5	25.8	26.3
	Not very important	1.3	2.8	0.0	5.1	0.0	4.4	4.5	4.6	0.0	0.0	1.4	1.3	0.0	1.6	3.0	3.5
	Not at all important	1.1	0.4	0.0	0.0	2.8	2.9	1.5	0.0	1.4	0.0	0.0	0.0	1.6	0.0	0.0	0.0
	N	472	460	61	59	71	69	67	66	73	73	73	75	61	61	66	57
D7j	Collecting and using patient feedback to improve quality of care and patient experience over time																
	Very important	54.7	62.6	56.5	58.3	38.0	42.9	44.8	68.2	54.9	45.8	58.9	73.3	65.6	77.4	66.2	75.4
	Somewhat important	40.6	31.4	40.3	33.3	50.7	47.1	50.8	21.2	42.3	51.4	38.4	22.7	31.2	19.4	29.2	21.1
	Not very important	3.6	5.4	1.6	8.3	8.5	8.6	4.5	10.6	2.8	1.4	1.4	2.7	1.6	3.2	4.6	3.5
	Not at all important	1.1	0.7	1.6	0.0	2.8	1.4	0.0	0.0	0.0	1.4	1.4	1.3	1.6	0.0	0.0	0.0
	N	470	462	62	60	71	70	67	66	71	72	73	75	61	62	65	57

Table A.7. (*continued*)

Question		CPC-wide 2014	CPC-wide 2015	AR 2014	AR 2015	CO 2014	CO 2015	NJ 2014	NJ 2015	NY 2014	NY 2015	OH/KY 2014	OH/KY 2015	OK 2014	OK 2015	OR 2014	OR 2015
D7k	Making sure that care is coordinated across the medical neighborhood																
	Very important	80.6	79.9	77.8	70.0	83.1	67.1	76.1	87.9	79.5	78.1	93.2	87.8	72.1	95.2	80.3	71.9
	Somewhat important	18.1	18.4	22.2	28.3	14.1	28.6	22.4	10.6	19.2	21.9	5.5	9.5	26.2	4.8	19.7	26.3
	Not very important	0.8	1.3	0.0	1.7	1.4	1.4	1.5	1.5	1.4	0.0	1.4	2.7	0.0	0.0	0.0	1.8
	Not at all important	0.4	0.4	0.0	0.0	1.4	2.9	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0
	N	474	462	63	60	71	70	67	66	73	73	73	74	61	62	66	57
D7l	Using data feedback on clinical measures to improve quality of care over time																
	Very important	67.2	68.0	61.9	56.7	72.2	68.6	69.7	64.6	68.1	45.2	64.4	84.0	61.7	79.0	71.2	79.0
	Somewhat important	29.7	28.8	30.2	33.3	26.4	25.7	27.3	33.9	27.8	53.4	34.3	13.3	36.7	19.4	25.8	21.1
	Not very important	2.8	2.6	7.9	10.0	1.4	4.3	3.0	0.0	4.2	1.4	1.4	1.3	0.0	1.6	1.5	0.0
	Not at all important	0.4	0.7	0.0	0.0	0.0	1.4	0.0	1.5	0.0	0.0	0.0	1.3	1.7	0.0	1.5	0.0
	N	472	462	63	60	72	70	66	65	72	73	73	75	60	62	66	57
D7m	Using shared decision making tools																
	Very important	42.9	38.5	27.0	36.7	38.9	25.7	28.4	42.4	56.9	28.8	46.6	52.0	61.7	47.5	40.9	36.8
	Somewhat important	45.2	46.1	44.4	43.3	52.8	45.7	56.7	42.4	31.9	61.6	48.0	41.3	33.3	47.5	48.5	38.6
	Not very important	10.6	13.2	27.0	16.7	6.9	25.7	11.9	10.6	9.7	9.6	5.5	6.7	5.0	3.3	9.1	21.1
	Not at all important	1.3	2.2	1.6	3.3	1.4	2.9	3.0	4.6	1.4	0.0	0.0	0.0	0.0	1.6	1.5	3.5
	N	473	462	63	60	72	70	67	66	72	73	73	75	60	61	66	57
Feedback reports and data files																	
D2	Staff who review feedback reports and/or data files																
	Staff in practice site	37.6	38.6	50.0	55.0	52.2	52.9	74.6	66.7	21.1	26.0	13.5	12.0	26.7	27.4	27.7	35.0
	Staff in larger health care system or medical group	19.4	15.2	8.1	5.0	13.0	5.7	6.0	3.0	18.3	9.6	52.7	46.7	21.7	12.9	12.3	20.0
	A combination	41.9	45.7	41.9	40.0	33.3	41.4	19.4	28.8	59.2	64.4	33.8	41.3	51.7	59.7	55.4	43.3
	Neither	1.1	0.4	0.0	0.0	1.5	0.0	0.0	1.5	1.4	0.0	0.0	0.0	0.0	0.0	4.6	1.7
	N	468	466	62	60	69	70	67	66	71	73	74	75	60	62	65	60
Experience with feedback reports and data files from Medicare FFS																	
D1a_1	Frequency of review of feedback reports from Medicare FFS																
	Never	2.6	1.1	0.0	0.0	0.0	1.4	9.1	0.0	1.4	4.2	0.0	0.0	1.8	0.0	6.1	1.8
	Rarely	5.1	4.4	7.9	5.2	5.6	8.6	3.0	1.5	1.4	1.4	1.4	2.7	7.0	0.0	10.6	12.3
	Sometimes	14.5	16.0	14.3	20.7	11.3	7.1	9.1	13.6	5.6	19.4	26.0	12.3	24.6	8.2	12.1	33.3
	Most of the time	19.2	23.2	25.4	24.1	22.5	14.3	27.3	21.2	19.4	23.6	12.3	12.3	7.0	49.2	19.7	21.1
	Always	53.4	54.3	47.6	50.0	56.3	67.1	51.5	62.1	61.1	48.6	57.5	72.6	56.1	41.0	42.4	31.6
	Did not receive	5.1	1.1	4.8	0.0	4.2	1.4	0.0	1.5	11.1	2.8	2.7	0.0	3.5	1.6	9.1	0.0
	N	468	457	63	58	71	70	66	66	72	72	73	73	57	61	66	57

Table A.7. (*continued*)

Question		CPC-wide 2014	CPC-wide 2015	AR 2014	AR 2015	CO 2014	CO 2015	NJ 2014	NJ 2015	NY 2014	NY 2015	OH/KY 2014	OH/KY 2015	OK 2014	OK 2015	OR 2014	OR 2015
D1a_2	Of those that reported reviewing the reports, usefulness of feedback reports from Medicare FFS																
	Very	21.5	35.0	13.7	34.6	23.4	40.3	44.4	44.1	24.4	40.7	4.4	33.8	21.2	34.5	23.1	15.1
	Somewhat	68.1	54.6	72.6	47.3	64.1	46.8	46.3	50.9	73.3	57.6	88.2	51.5	75.0	62.1	53.9	67.9
	Not very	9.8	10.4	11.8	18.2	12.5	12.9	7.4	5.1	2.2	1.7	7.4	14.7	3.9	3.5	23.1	17.0
	Not at all	0.5	0.0	2.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	N	386	414	51	55	64	62	54	59	45	59	68	68	52	58	52	53
D1c_1	Frequency of review of patient-level data files from Medicare FFS																
	Never	5.8	6.2	7.9	1.7	1.4	4.4	13.9	1.6	2.9	15.3	0.0	8.2	7.0	5.2	9.4	5.3
	Rarely	17.5	12.4	14.3	12.1	15.5	5.8	4.6	21.9	2.9	16.7	34.3	6.9	36.8	3.5	15.6	21.1
	Sometimes	20.5	25.3	14.3	22.4	28.2	24.6	20.0	20.3	15.7	20.8	26.0	41.1	21.1	19.0	17.2	26.3
	Most of the time	15.8	21.1	9.5	24.1	28.2	27.5	23.1	17.2	15.7	16.7	1.4	6.9	10.5	39.7	21.9	19.3
	Always	30.0	31.5	23.8	34.5	18.3	37.7	32.3	32.8	50.0	26.4	34.3	37.0	21.1	24.1	28.1	26.3
	Did not receive	10.4	3.6	30.2	5.2	8.5	0.0	6.2	6.3	12.9	4.2	4.1	0.0	3.5	8.6	7.8	1.8
	N	463	451	63	58	71	69	65	64	70	72	73	73	57	58	64	57
D1c_2	Of those that reported reviewing, usefulness of patient-level data files from Medicare FFS																
	Very	13.4	27.5	17.1	39.6	8.3	32.1	26.1	25.5	14.0	23.4	4.5	11.5	12.5	57.1	17.7	7.8
	Somewhat	64.0	54.2	57.1	45.8	51.7	32.1	52.2	45.5	83.7	63.8	71.6	78.7	77.1	38.8	54.9	72.6
	Not very	19.4	17.4	14.3	14.6	36.7	32.1	19.6	29.1	2.3	10.6	22.4	9.8	8.3	4.1	23.5	19.6
	Not at all	3.1	0.8	11.4	0.0	3.3	3.6	2.2	0.0	0.0	2.1	1.5	0.0	2.1	0.0	3.9	0.0
	N	350	367	35	48	60	56	46	55	43	47	67	61	48	49	51	51
Experience with feedback reports and data files from other participating payers																	
D1b_1	Frequency of review of feedback reports from other participating payers in CPC																
	Never	4.7	5.7	7.9	1.7	1.4	1.4	12.1	7.7	4.1	15.1	0.0	8.2	5.3	1.6	3.1	1.8
	Rarely	8.3	6.8	9.5	11.9	13.9	4.3	3.0	3.1	2.7	4.1	1.4	5.5	17.5	1.6	12.3	19.3
	Sometimes	25.2	17.5	17.5	23.7	30.6	24.3	16.7	10.8	6.9	15.1	49.3	11.0	38.6	11.5	16.9	28.1
	Most of the time	21.8	32.1	9.5	18.6	26.4	15.7	16.7	32.3	28.8	23.3	30.1	67.1	10.5	39.3	26.2	24.6
	Always	26.4	31.2	20.6	30.5	22.2	47.1	42.4	33.9	41.1	37.0	8.2	8.2	22.8	42.6	27.7	19.3
	Did not receive	13.7	6.8	34.9	13.6	5.6	7.1	9.1	12.3	16.4	5.5	11.0	0.0	5.3	3.3	13.9	7.0
	N	469	458	63	59	72	70	66	65	73	73	73	73	57	61	65	57
D1b_2	Of those that reported reviewing the reports, usefulness of feedback reports from other participating payers in CPC																
	Very	13.2	25.5	3.5	25.0	12.7	20.7	37.5	27.1	21.1	19.6	3.2	29.0	6.1	42.9	9.6	12.2
	Somewhat	60.1	62.0	48.3	47.7	58.7	58.6	52.1	66.7	76.3	78.4	67.7	59.7	69.4	55.4	46.2	67.4
	Not very	24.6	11.1	41.4	25.0	25.4	20.7	8.3	6.3	2.6	2.0	27.4	11.3	24.5	0.0	42.3	14.3

Table A.7. (*continued*)

Question		CPC-wide		AR		CO		NJ		NY		OH/KY		OK		OR	
		2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015	2014	2015
	Not at all	2.1	1.4	6.9	2.3	3.2	0.0	2.1	0.0	0.0	0.0	1.6	0.0	0.0	1.8	1.9	6.1
	N	341	368	29	44	63	58	48	48	38	51	62	62	49	56	52	49
D1d_1	Frequency of review of patient-level data files from other participating payers in CPC																
	Never	6.3	6.9	16.1	1.7	4.2	1.4	6.2	9.4	4.2	8.8	0.0	9.7	11.1	4.9	4.6	12.3
	Rarely	11.9	12.9	14.5	18.6	19.7	15.7	6.2	12.5	4.2	10.3	5.5	6.9	20.4	4.9	15.2	22.8
	Sometimes	28.5	30.6	14.5	25.4	39.4	32.9	13.9	18.8	12.5	23.5	53.4	44.4	40.7	39.3	24.2	28.1
	Most of the time	15.1	18.6	6.5	18.6	11.3	21.4	16.9	14.1	19.4	19.1	27.4	29.2	3.7	11.5	16.7	14.0
	Always	23.3	22.2	11.3	15.3	18.3	20.0	46.2	32.8	41.7	29.4	6.9	8.3	16.7	36.1	21.2	14.0
	Did not receive	14.9	8.9	37.1	20.3	7.0	8.6	10.8	12.5	18.1	8.8	6.9	1.4	7.4	3.3	18.2	8.8
	N	463	451	62	59	71	70	65	64	72	68	73	72	54	61	66	57
D1d_2	Of those that reported reviewing, usefulness of patient-level data files from other participating payers in CPC																
	Very	14.0	21.3	7.7	15.4	6.7	16.1	36.7	34.0	13.5	21.8	4.6	10.3	22.7	40.7	8.5	9.1
	Somewhat	63.1	62.6	65.4	53.9	53.3	58.9	57.1	46.8	86.5	72.7	75.4	82.8	63.6	55.6	44.7	61.4
	Not very	20.1	14.7	19.2	30.8	36.7	25.0	4.1	19.2	0.0	1.8	20.0	6.9	11.4	1.9	40.4	25.0
	Not at all	2.7	1.4	7.7	0.0	3.3	0.0	2.0	0.0	0.0	3.6	0.0	0.0	2.3	1.9	6.4	4.6
	N	328	353	26	39	60	56	49	47	37	55	65	58	44	54	47	44
Proportion of patients attributed by CPC payers																	
D3	Proportion of practice's total patient panel that is included in or attributed to CPC																
	Less than 20 percent	12.4	12.4	4.8	5.0	17.1	5.8	11.9	9.1	4.2	8.7	0.0	1.4	29.3	31.2	22.7	29.8
	20 to 39 percent	22.4	17.2	23.8	21.7	24.3	21.7	43.3	24.2	14.1	7.3	21.6	15.5	10.3	6.6	18.2	24.6
	40 to 59 percent	25.0	27.4	19.1	20.0	24.3	34.8	23.9	37.9	22.5	33.3	41.9	36.6	6.9	9.8	31.8	14.0
	60 to 79 percent	25.2	25.6	47.6	38.3	21.4	20.3	13.4	13.6	31.0	20.3	23.0	26.8	24.1	39.3	16.7	22.8
	80 percent or more	15.1	17.4	4.8	15.0	12.9	17.4	7.5	15.2	28.2	30.4	13.5	19.7	29.3	13.1	10.6	8.8
	N	469	453	63	60	70	69	67	66	71	69	74	71	58	61	66	57
Adequacy of practice payments from Medicare FFS and other payers																	
D4	Medicare FFS																
	More than adequate	12.8	4.0	25.8	6.7	9.0	6.0	9.1	0.0	10.1	1.5	11.4	6.9	21.4	1.6	4.7	5.5
	Adequate	68.1	71.8	51.6	71.7	73.1	59.7	47.0	72.3	75.4	88.4	87.1	80.6	69.6	67.7	70.3	58.2
	Less than adequate	19.2	24.2	22.6	21.7	17.9	34.3	43.9	27.7	14.5	10.1	1.4	12.5	8.9	30.7	25.0	36.4
	N	454	450	62	60	67	67	66	65	69	69	70	72	56	62	64	55

Table A.7. (*continued*)

Question		CPC-wide 2014	CPC-wide 2015	AR 2014	AR 2015	CO 2014	CO 2015	NJ 2014	NJ 2015	NY 2014	NY 2015	OH/KY 2014	OH/KY 2015	OK 2014	OK 2015	OR 2014	OR 2015
D4a	Likelihood practice will receive CPC shared savings or bonus payments from any CPC participating payer in 2015																
	Very	n.a.	30.8	n.a.	22.0	n.a.	28.6	n.a.	21.2	n.a.	23.3	n.a.	36.5	n.a.	50.0	n.a.	35.1
	Somewhat	n.a.	45.3	n.a.	54.2	n.a.	38.6	n.a.	47.0	n.a.	63.0	n.a.	37.8	n.a.	32.3	n.a.	43.9
	Not very	n.a.	18.2	n.a.	18.6	n.a.	20.0	n.a.	24.2	n.a.	12.3	n.a.	24.3	n.a.	9.7	n.a.	17.5
	Not at all	n.a.	5.6	n.a.	5.1	n.a.	12.9	n.a.	7.6	n.a.	1.4	n.a.	1.4	n.a.	8.1	n.a.	3.5
	N	n.a.	461	n.a.	59	n.a.	70	n.a.	66	n.a.	73	n.a.	74	n.a.	62	n.a.	57
Regional payers																	
Payer Composite	Average adequacy among all payers in the region																
	More than adequate	n.a.	n.a.	0.0	1.7	0.3	0.3	0.7	0.0	4.0	0.7	1.4	4.1	0.0	1.6	0.0	1.5
	Adequate	n.a.	n.a.	22.8	36.6	38.6	26.1	22.8	22.8	54.4	54.2	64.9	63.8	25.2	26.6	28.5	26.4
	Less than adequate	n.a.	n.a.	68.3	53.3	32.3	45.7	38.7	33.9	18.4	25.4	21.8	20.3	37.0	38.8	31.1	35.6
	Not working with payer	n.a.	n.a.	8.9	8.3	28.9	27.9	37.7	43.3	23.2	19.7	11.9	11.8	37.8	33.1	40.4	36.5
	N	n.a.	n.a.	62	60	70	69	67	66	70	71	71	73	57	62	64	56

Sources: CPC practice surveys administered April through July 2014, and April through August 2015.

Note: Question numbers pertain to the 2015 CPC practice survey.

n.a. = not applicable, because the question was not asked in the given survey round; FFS = fee for service.

APPENDIX B:

PATIENT EXPERIENCE SURVEY RESULTS

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In this appendix, we present additional results from the first three rounds of the CPC patient survey that we detail in Chapter 6. The first survey was administered June through October 2013, 8 to 12 months after CPC began; the second was administered July through October 2014, 21 to 24 months after CPC began; and the third was administered July through October 2015, 33 to 36 months after CPC began.

Tables B.1–B.8 present the predicted probability for a sample of Medicare fee-for-service (FFS) patients giving the best response to individual survey questions and domain-level aggregates for CPC and comparison practices, for the CPC-wide sample and each of the seven regions. Each of these tables also presents the year-to-year differences in the predicted probabilities for CPC and comparison practices, and difference-in-differences estimates comparing the change from 2012 to 2015 between CPC and comparison practices for individual questions and domain-level aggregates.

Tables B.9 and B.10 present the results of our analysis using mean responses. Table B.9 presents mean responses to individual survey questions and the domain-level aggregates for a sample of Medicare FFS patients in CPC and comparison practices CPC-wide. Table B.10 presents difference-in-differences estimates comparing the change in mean responses from 2012 to 2015 between CPC and comparison practices for the domain-level aggregates by region.

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Table B.1. The proportion of patients giving the best response in each of the three rounds of the CPC patient survey, sample of attributed Medicare FFS beneficiaries CPC-wide (percentage)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Composite measures													
Timely appointments, care, and information (five questions)	52.4	53.0	52.5	0.5	-0.5	0.0	53.0	52.5	54.1	-1.6	0.5	-1.1	1.0
Provider communication (six questions)	80.2	79.9	79.7	0.3	0.3	0.5	81.1	80.7	80.8	-0.1	0.5	0.3	0.2
Providers' knowledge of care the patient received from other providers (two questions)	77.0	76.5	76.0	0.4	0.5	**1.0****	77.0	76.3	76.8	-0.5	0.7	0.2	0.7
Providers support patients in taking care of their own health (two questions)	51.5	47.9	46.0	**1.8*****	**3.6*****	**5.5*****	52.1	46.3	48.1	*-1.9***	**5.8*****	**3.9*****	1.5
Providers discuss medication decisions with patients (three questions)	61.3	61.6	60.1	**1.5*****	-0.3	**1.2***	63.4	61.1	62.7	-1.6	**2.2****	0.6	0.6
Patients' rating of the provider (one question)	76.5	75.7	75.1	0.7	0.8	**1.5*****	76.2	76.6	76.5	0.1	-0.4	-0.4	1.8
Individual questions													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	64.6	67.1	67.0	0.1	*-2.5****	*-2.4****	65.7	66.7	68.7	-2.0	-1.0	*-3.0**	0.5
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	70.5	71.9	71.7	0.2	*-1.4***	*-1.2***	70.4	71.2	73.3	*-2.0**	-0.8	*-2.8***	1.6
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	56.2	57.1	56.3	0.8	-0.9	-0.1	58.0	58.3	59.1	-0.8	-0.3	-1.1	1.0

Table B.1. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	54.2	54.6	52.5	2.1	-0.4	1.8	59.1	54.1	51.4	2.7	5.0	**7.7***	-5.9
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	31.0	29.7	28.7	**1.0****	**1.3****	**2.3*****	31.9	30.1	29.6	0.5	1.8	2.3	0.0
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	44.5	43.0	44.8	*-1.9***	**1.5***	-0.4	43.1	43.1	47.7	*-4.6****	0.1	*-4.6****	**4.2****
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	79.3	78.8	77.8	**1.0****	0.5	**1.5*****	78.3	79.5	79.5	-0.0	-1.1	-1.2	**2.7****
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	32.8	36.0	32.7	**3.4****	*-3.2***	0.2	29.7	33.6	35.7	-2.2	-3.8	*-6.0***	**6.2****
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	82.0	81.6	81.2	0.5	0.3	0.8	82.6	81.9	82.0	0.0	0.7	0.6	0.2
Q25: Provider always listened carefully to patient	82.6	82.6	82.8	-0.2	0.1	-0.2	83.9	83.3	83.5	-0.2	0.5	0.3	-0.5
Q27: When patient talked with provider about health questions and concerns, provider always gave the patient easy-to-understand information	78.3	77.7	79.3	*-1.6****	0.7	*-1.0**	79.3	78.7	80.5	*-1.9***	0.7	-1.2	0.2

Table B.1. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q28: Provider always seemed to know important information about patient's medical history	74.5	74.4	73.6	0.8	0.1	**0.9***	75.2	74.4	75.0	-0.6	0.7	0.2	0.8
Q29: Provider always showed respect for what patient had to say	87.1	87.0	87.1	-0.1	0.1	0.0	88.9	88.0	87.5	0.6	0.8	**1.4***	*-1.4**
Q30: Provider always spent enough time with patient	77.4	77.1	75.5	**1.6*****	0.2	**1.8*****	78.0	78.3	76.4	**1.9***	-0.3	1.6	0.3
Q38: Patient always felt that provider really cared about patient as a person	78.2	77.7	77.2	0.5	0.5	**1.0****	78.9	78.4	79.1	-0.8	0.6	-0.2	1.2
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	69.8	70.6	65.7	**4.9***	-0.9	**4.1***	75.1	70.4	68.1	2.4	4.6	**7.0***	-3.0
Q21: If provider's office used a web portal or website, patient used it often (more than three times) to email the practice, review medical information, request prescription renewal, or make appointments	14.0	12.7	n.a.	n.a.	**1.3****	n.a.	16.3	13.5	n.a.	n.a.	**2.8***	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	71.1	70.2	68.8	**1.4****	**0.9***	**2.3*****	70.1	69.2	70.1	-0.8	0.8	0.0	2.3
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	75.7	76.0	76.4	-0.3	-0.3	-0.6	74.3	76.5	77.6	-1.1	*-2.2**	*-3.3****	**2.7***
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	45.6	43.7	38.8	**5.0*****	**1.9*****	**6.9*****	44.5	42.0	40.0	1.9	**2.5***	**4.4*****	2.4

Table B.1. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	43.7	44.2	41.2	**3.0*** **	-0.5	**2.6*** **	43.6	43.0	42.7	0.4	0.5	0.9	1.7
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	28.5	29.7	29.2	0.4	*-1.2***	-0.8	29.3	28.8	29.9	-1.1	0.6	-0.6	-0.2
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	68.7	67.1	66.6	0.5	**1.6*** **	**2.2*** **	70.4	68.7	68.0	0.7	1.7	**2.4***	-0.3
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	84.0	83.7	82.4	**1.2*** **	0.4	**1.6*** **	85.1	84.2	84.1	0.0	0.9	0.9	0.7
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	60.2	58.4	59.0	-0.5	**1.8*** **	**1.3***	60.9	59.8	61.0	-1.2	1.1	-0.1	1.4
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	87.7	87.7	86.7	**1.1*** **	0.0	**1.1*** **	87.0	86.7	86.5	0.1	0.4	0.5	0.5
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	74.9	76.2	77.1	-0.8	-1.3	*-2.2***	74.4	74.6	79.4	*-4.8****	-0.2	*-4.9****	2.8
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	55.8	56.0	56.4	-0.4	-0.3	-0.7	57.3	56.2	57.1	-0.9	1.2	0.2	-0.9

Table B.1. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	7.8	9.4	8.1	**1.3*** **	*-1.6*** **	-0.3	7.8	10.1	8.5	**1.6** **	*-2.3*** **	-0.7	0.4
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	18.8	20.2	21.6	**-1.4** **	**-1.4*** **	**-2.8*** **	19.3	21.5	22.1	-0.5	**-2.3** **	**-2.8*** **	0.0
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	57.0	57.1	58.2	*-1.2** *	-0.1	-1.2	58.1	58.9	59.8	-0.9	-0.8	-1.7	0.4
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	n.a.	n.a.	69.8	n.a.	n.a.	n.a.	n.a.	n.a.	65.4	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	n.a.	n.a.	94.6	n.a.	n.a.	n.a.	n.a.	n.a.	95.7	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	58.7	56.5	n.a.	n.a.	**2.3***	n.a.	53.9	53.3	n.a.	n.a.	0.6	n.a.	n.a.

Table B.1. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	57.0	54.3	n.a.	n.a.	**2.6****	n.a.	50.5	49.4	n.a.	n.a.	1.1	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	65.8	60.0	59.1	**1.0***	**5.7*****	**6.7*****	65.8	58.0	61.3	*-3.3****	**7.8*****	**4.5*****	**2.2****
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	36.9	35.3	32.6	**2.8*****	**1.5*****	**4.3*****	38.2	34.1	34.8	-0.7	**4.1*****	**3.4*****	0.9
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	72.8	n.a.	n.a.	n.a.	n.a.	n.a.	74.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	62.3	62.3	61.1	**1.2***	0.0	1.2	65.6	62.9	63.6	-0.7	**2.7****	2.0	-0.8
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	43.7	44.2	43.7	0.5	-0.5	0.0	44.9	43.5	45.9	-2.3	1.4	-1.0	1.0
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	78.1	78.5	76.2	**2.3*****	-0.4	**1.9*****	79.9	77.8	78.9	-1.1	**2.1***	1.1	0.9

Table B.1. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	36.2	36.6	n.a.	n.a.	-0.4	n.a.	38.2	36.1	n.a.	n.a.	2.1	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	46.5	46.2	n.a.	n.a.	0.3	n.a.	44.3	42.9	n.a.	n.a.	1.4	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	76.5	75.7	75.1	0.7	0.8	**1.5*** **	76.2	76.6	76.5	0.1	-0.4	-0.4	1.8
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	17.5	17.9	n.a.	n.a.	-0.4	n.a.	18.8	17.0	n.a.	n.a.	**1.7***	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in table rows that we outlined with a black box are used for the composite measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

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Table B.2. The proportion of patients giving the best response in each of the three rounds of the CPC patient survey, sample of attributed Medicare FFS beneficiaries in Arkansas (percentage)

	Patients in CPC practices (AR)						Patients in comparison practices (AR)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Composite measures													
Timely appointments, care, and information (five questions)	49.4	50.5	50.4	0.1	-1.0	-1.0	49.7	53.9	53.5	0.4	-4.2	-3.8	2.8
Provider communication (six questions)	79.7	79.2	78.2	1.0	0.5	**1.5***	78.8	81.5	81.9	-0.4	-2.7	-3.1	**4.6****
Providers' knowledge of care the patient received from other providers (two questions)	78.2	77.1	75.3	**1.8***	1.1	**2.9****	75.2	74.0	76.8	-2.8	1.1	-1.7	**4.5***
Providers support patients in taking care of their own health (two questions)	50.7	48.5	46.7	1.8	**2.3***	**4.1*****	49.6	42.7	47.4	*-4.7***	**6.9*****	2.3	1.8
Providers discuss medication decisions with patients (three questions)	59.6	60.6	57.2	**3.5*****	-1.0	**2.4***	63.2	59.1	64.1	*-5.0**	4.1	-0.9	3.4
Patients' rating of the provider (one question)	77.4	76.0	74.3	**1.8***	1.4	**3.1*****	75.2	77.6	78.3	-0.6	-2.5	-3.1	**6.2***
Individual questions													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	64.8	68.2	68.2	0.0	*-3.4**	-3.3	67.7	75.5	72.7	2.8	*-7.8***	-5.0	1.7
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	72.3	73.6	74.1	-0.5	-1.3	-1.8	72.0	78.8	79.5	-0.8	*-6.8***	*-7.5***	5.7
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	58.7	57.9	56.5	1.3	0.8	2.2	59.2	65.8	64.8	1.0	*-6.6**	-5.6	7.8

Table B.2. (*continued*)

Question	Patients in CPC practices (AR)						Patients in comparison practices (AR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	48.1	57.0	37.2	**19.8*** **	-8.8	10.9	47.2	61.7	49.3	12.4	-14.5	-2.1	13.0
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	20.4	20.4	20.7	-0.3	0.0	-0.2	21.8	21.8	21.5	0.3	-0.1	0.3	-0.5
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	43.7	40.6	45.5	*-4.9****	3.2	-1.8	44.0	45.1	54.6	*-9.6****	-1.0	*-10.6****	**8.9****
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	80.4	79.9	79.2	0.8	0.5	1.3	74.6	83.3	81.3	2.0	*-8.6****	*-6.7***	**7.9*****
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	30.6	38.6	34.2	4.4	*-8.1***	-3.6	33.3	33.9	44.8	-10.8	-0.7	*-11.5**	7.9
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	80.5	79.4	79.1	0.4	1.1	1.4	80.7	81.8	80.9	1.0	-1.1	-0.2	1.6
Q25: Provider always listened carefully to patient	82.5	82.0	81.4	0.6	0.5	1.1	81.1	83.4	84.8	-1.4	-2.3	-3.7	**4.8***
Q27: When patient talked with provider about health questions and concerns, provider always gave the patient easy-to-understand information	76.6	76.1	79.4	*-3.3****	0.6	*-2.7**	76.6	81.5	84.0	-2.5	*-5.0**	*-7.4****	4.7

Table B.2. (*continued*)

Question	Patients in CPC practices (AR)						Patients in comparison practices (AR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q28: Provider always seemed to know important information about patient's medical history	74.5	74.4	71.4	**3.1****	0.1	**3.2*****	72.0	76.3	79.4	-3.1	-4.3	*-7.4***	**10.6*****
Q29: Provider always showed respect for what patient had to say	86.9	86.2	85.8	0.4	0.7	1.1	87.5	88.3	87.9	0.3	-0.8	-0.4	1.5
Q30: Provider always spent enough time with patient	77.2	77.0	73.8	**3.2*****	0.2	**3.4*****	74.5	78.4	76.7	1.7	-3.9	-2.2	**5.6***
Q38: Patient always felt that provider really cared about patient as a person	79.2	77.2	76.9	0.3	**2.0***	**2.3***	77.0	79.2	81.3	-2.1	-2.2	*-4.3**	**6.6****
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	59.1	64.9	70.0	-5.0	-5.8	-10.9	78.2	75.4	41.2	34.1	2.9	37.0	*-47.9**
Q21: If provider's office used a web portal or website, patient used it often (more than three times) to email the practice, review medical information, request prescription renewal, or make appointments	9.1	7.3	n.a.	n.a.	1.8	n.a.	9.8	8.0	n.a.	n.a.	1.7	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	72.3	72.1	69.5	**2.6***	0.2	2.8	69.2	66.7	71.8	-5.1	2.5	-2.5	5.3
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	76.6	77.1	75.9	1.1	-0.5	0.7	75.7	81.2	82.6	-1.5	*-5.5***	*-6.9***	**7.6****
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	41.9	41.6	36.8	**4.8*****	0.2	**5.1*****	37.2	35.6	37.4	-1.9	1.6	-0.2	5.3

Table B.2. (*continued*)

Question	Patients in CPC practices (AR)						Patients in comparison practices (AR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	41.4	41.3	38.8	2.6	0.1	**2.6***	38.3	36.8	38.6	-1.8	1.5	-0.3	2.9
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	27.3	26.7	25.5	1.2	0.6	1.8	25.5	25.2	25.4	-0.2	0.3	0.1	1.6
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	69.4	70.3	69.0	1.3	-0.9	0.4	72.3	75.0	71.2	3.8	-2.7	1.1	-0.7
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	82.7	83.9	83.7	0.2	-1.3	-1.0	85.5	85.3	88.9	*-3.5**	0.1	-3.4	2.4
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	61.6	58.4	58.9	-0.5	**3.2****	2.7	57.2	58.7	62.5	-3.9	-1.4	-5.3	**8.0***
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	87.9	87.7	85.5	**2.2****	0.1	**2.3****	85.3	84.5	85.9	-1.4	0.8	-0.6	2.9
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	75.8	76.4	76.3	0.1	-0.6	-0.5	74.6	79.8	78.3	1.6	-5.2	-3.6	3.1
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	58.7	58.3	60.6	-2.3	0.3	-2.0	61.7	61.0	60.4	0.6	0.7	1.3	-3.3

Table B.2. (*continued*)

Question	Patients in CPC practices (AR)						Patients in comparison practices (AR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	8.9	10.0	6.6	**3.4*** **	-1.1	**2.4***	7.2	8.4	9.0	-0.6	-1.1	-1.8	**4.2***
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	21.6	26.4	24.3	2.1	*-4.8****	*-2.7***	23.3	24.7	27.2	-2.5	-1.4	-3.9	1.2
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	57.6	57.8	63.2	*-5.4****	-0.2	*-5.6****	57.3	62.5	59.7	2.8	-5.2	-2.4	-3.2
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	n.a.	n.a.	71.4	n.a.	n.a.	n.a.	n.a.	n.a.	73.4	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	n.a.	n.a.	93.4	n.a.	n.a.	n.a.	n.a.	n.a.	95.8	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	57.7	56.8	n.a.	n.a.	0.9	n.a.	55.7	48.4	n.a.	n.a.	7.3	n.a.	n.a.

Table B.2. (*continued*)

Question	Patients in CPC practices (AR)						Patients in comparison practices (AR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	55.9	52.9	n.a.	n.a.	3.0	n.a.	46.5	48.3	n.a.	n.a.	-1.8	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	64.8	60.8	60.0	0.8	**4.1*** **	**4.8*** **	61.7	54.3	61.6	*-7.4*** **	**7.4*** **	0.1	4.7
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	36.3	35.8	32.8	**3.1****	0.5	**3.5****	37.3	30.9	33.2	-2.3	**6.4***	4.1	-0.6
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	73.6	n.a.	n.a.	n.a.	n.a.	n.a.	71.0	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	60.7	60.2	58.6	1.5	0.6	2.1	65.0	60.2	66.5	*-6.3**	4.8	-1.4	3.6
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	43.6	45.2	41.6	**3.6****	-1.6	2.0	44.9	43.9	47.2	-3.3	1.1	-2.3	4.2
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	75.4	76.2	72.3	**3.9*** **	-0.8	**3.1***	80.2	74.1	78.2	-4.1	**6.1***	2.0	1.1

Table B.2. (*continued*)

Question	Patients in CPC practices (AR)						Patients in comparison practices (AR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	33.9	36.3	n.a.	n.a.	-2.4	n.a.	35.3	34.7	n.a.	n.a.	0.7	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	39.1	40.9	n.a.	n.a.	-1.8	n.a.	32.7	35.8	n.a.	n.a.	-3.0	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	77.4	76.0	74.3	**1.8***	1.4	3.1	75.2	77.6	78.3	-0.6	-2.5	-3.1	**6.2***
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	21.0	21.0	n.a.	n.a.	0.0	n.a.	22.3	18.4	n.a.	n.a.	3.9	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in tablle rows that we outlined with a black box are used for the composites measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

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Table B.3. The proportion of patients giving the best response in each of the three rounds of the CPC patient survey, sample of attributed Medicare FFS beneficiaries in Colorado (percentage)

	Patients in CPC practices (CO)						Patients in comparison practices (CO)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Composite measures													
Timely appointments, care, and information (five questions)	53.1	54.2	55.0	-0.8	-1.1	*-1.9***	53.3	51.0	54.2	*-3.2**	2.2	-1.0	-1.0
Provider communication (six questions)	81.1	79.6	81.1	*-1.5**	**1.5***	0.0	81.8	79.9	80.4	-0.5	1.9	1.4	-1.4
Providers' knowledge of care the patient received from other providers (two questions)	77.5	77.4	78.7	-1.3	0.1	-1.3	80.6	75.9	76.0	-0.1	**4.7****	**4.6****	*-5.9****
Providers support patients in taking care of their own health (two questions)	53.5	48.2	48.1	0.1	**5.3****	**5.4****	54.4	46.2	47.5	-1.3	**8.2****	**7.0****	-1.6
Providers discuss medication decisions with patients (three questions)	63.4	63.7	63.2	0.5	-0.3	0.2	63.6	59.5	62.7	-3.2	**4.0***	0.8	-0.6
Patients' rating of the provider (one question)	76.9	74.8	77.3	*-2.5***	**2.1***	-0.4	75.2	74.0	79.9	*-5.8***		*-4.7**	4.3
Individual questions													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	60.8	64.8	66.0	-1.2	*-4.0**	*-5.2****	63.7	60.6	70.0	*-9.4****	3.1	*-6.3***	1.1
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	67.1	67.9	69.7	-1.8	-0.9	-2.6	68.0	67.7	71.6	*-3.9**	0.3	-3.6	1.0
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	51.4	52.6	53.3	-0.7	-1.2	-1.9	51.2	50.9	48.8	2.1	0.3	2.4	-4.3

Table B.3. (*continued*)

Question	Patients in CPC practices (CO)						Patients in comparison practices (CO)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	60.1	68.4	60.5	**7.9***	-8.3	-0.4	64.2	41.1	61.9	*-20.8**	**23.1****	2.3	-2.7
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	37.6	38.0	37.9	0.1	-0.4	-0.3	35.7	34.2	33.6	0.6	1.5	2.1	-2.4
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	38.5	42.1	44.6	-2.6	*-3.6**	*-6.1****	43.9	35.5	44.4	*-8.9***	**8.4****	-0.5	-5.6
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	80.4	79.2	78.2	1.0	1.2	**2.2***	82.8	77.9	79.1	-1.2	**4.9****	3.6	-1.4
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	36.4	38.1	30.5	**7.6****	-1.7	**5.8***	28.4	33.5	35.3	-1.7	-5.1	-6.9	**12.7***
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	84.2	82.4	83.2	-0.8	**1.8***	0.9	82.8	81.4	80.1	1.3	1.4	2.7	-1.8
Q25: Provider always listened carefully to patient	83.3	82.8	84.0	-1.2	0.5	-0.7	84.6	81.6	83.7	-2.1	3.0	0.9	-1.6
Q27: When patient talked with provider about health questions and concerns, provider always gave the patient easy-to-understand information	78.6	77.8	81.1	*-3.2****	0.8	*-2.5***	80.8	77.4	80.0	-2.6	3.4	0.8	-3.3

Table B.3. (*continued*)

Question	Patients in CPC practices (CO)						Patients in comparison practices (CO)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q28: Provider always seemed to know important information about patient's medical history	73.8	71.9	73.2	-1.3	2.0	0.6	75.3	73.1	72.0	1.1	2.2	3.3	-2.7
Q29: Provider always showed respect for what patient had to say	87.5	86.1	88.5	*-2.5***	1.4	-1.1	90.7	88.2	88.1	0.1	2.5	2.6	*-3.7**
Q30: Provider always spent enough time with patient	79.6	77.6	78.3	-0.6	**2.0****	1.4	77.9	77.7	78.5	-0.7	0.2	-0.5	1.9
Q38: Patient always felt that provider really cared about patient as a person	78.2	77.6	78.3	-0.7	0.5	-0.2	76.6	79.3	79.9	-0.6	-2.6	-3.3	3.1
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	68.2	64.4	67.4	-3.0	3.8	0.8	79.2	61.2	63.3	-2.1	**17.9***	15.9	-15.0
Q21: If provider's office used a web portal or website, patient used it often (more than 3 times) to email the practice, review medical information, request prescription renewal, or make appointments	11.7	7.5	n.a.	n.a.	**4.2****	n.a.	10.1	9.5	n.a.	n.a.	0.6	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	69.4	66.2	69.0	*-2.8***	**3.2*****	0.4	67.9	64.9	67.0	-2.1	2.9	0.9	-0.5
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	76.1	77.8	79.2	-1.4	*-1.6**	*-3.0****	74.8	76.1	75.9	0.2	-1.4	-1.1	-1.9
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	54.4	49.4	42.8	**6.6*****	**5.0*****	**11.6*****	50.9	45.7	44.2	1.5	**5.1***	**6.6****	5.0

Table B.3. (*continued*)

Question	Patients in CPC practices (CO)					Patients in comparison practices (CO)					DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	49.0	46.9	44.6	**2.3***	2.1	**4.4*****	46.8	45.7	45.2	0.5	1.1	1.6	2.8
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	29.5	29.8	30.9	-1.1	-0.3	-1.4	29.6	26.9	29.6	-2.6	2.6	0.0	-1.4
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	70.1	65.7	68.4	*-2.7***	**4.4*****	1.7	71.0	69.0	71.1	-2.1	2.0	-0.1	1.8
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	84.7	83.7	84.5	-0.8	1.0	0.2	82.7	85.4	86.4	-1.0	-2.7	-3.7	3.9
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	58.9	56.7	60.2	*-3.5***	2.2	-1.3	62.2	55.8	57.4	-1.7	**6.4*****	**4.7****	*-6.1***
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	88.7	89.0	89.4	-0.3	-0.3	-0.6	91.5	87.1	86.8	0.3	**4.4*****	**4.7*****	*-5.3****
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	78.1	76.1	82.0	*-5.8****	1.9	-3.9	76.0	72.6	76.3	-3.8	3.4	-0.4	-3.5
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	55.1	55.1	57.5	-2.4	0.0	-2.4	55.9	51.4	57.4	*-6.0***	4.5	-1.5	-0.9

Table B.3. (*continued*)

Question	Patients in CPC practices (CO)						Patients in comparison practices (CO)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	9.0	10.5	8.7	**1.7***	*-1.5**	0.2	8.0	13.4	8.9	4.5	*-5.4***	-0.9	1.2
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	17.2	17.8	21.6	*-3.8***	-0.6	*-4.4****	18.3	24.3	21.1	3.2	*-6.0**	-2.8	-1.5
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	56.8	57.2	55.3	1.8	-0.3	1.5	59.4	54.7	55.7	-1.0	4.7	3.7	-2.2
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	n.a.	n.a.	70.3	n.a.	n.a.	n.a.	n.a.	n.a.	62.5	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	n.a.	n.a.	95.6	n.a.	n.a.	n.a.	n.a.	n.a.	97.5	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	61.2	54.7	n.a.	n.a.	**6.5***	n.a.	52.6	55.3	n.a.	n.a.	-2.7	n.a.	n.a.

Table B.3. (*continued*)

Question	Patients in CPC practices (CO)						Patients in comparison practices (CO)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	56.2	55.0	n.a.	n.a.	1.2	n.a.	50.8	47.7	n.a.	n.a.	3.1	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	67.1	59.9	61.2	-1.4	**7.3*** **	**5.9*** **	70.0	59.0	60.8	-1.9	**11.0*** **	**9.1*** **	-3.2
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	39.6	36.3	34.6	1.7	**3.3** **	**5.0*** **	39.0	32.6	33.4	-0.8	**6.4*** **	**5.6** **	-0.6
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	69.8	n.a.	n.a.	n.a.	n.a.	n.a.	80.3	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	66.2	65.0	65.2	-0.2	1.2	1.0	63.6	61.2	62.8	-1.6	2.4	0.8	0.2
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	43.3	44.3	45.7	-1.4	-1.0	-2.4	45.6	39.9	45.9	*-6.0**	**5.7**	-0.3	-2.1
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	80.9	81.7	79.5	**2.2** **	-0.8	1.4	82.4	78.5	79.9	-1.5	3.9	2.5	-1.1

Table B.3. (*continued*)

Question	Patients in CPC practices (CO)						Patients in comparison practices (CO)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	41.7	42.3	n.a.	n.a.	-0.6	n.a.	37.7	32.0	n.a.	n.a.	5.6	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	51.3	50.5	n.a.	n.a.	0.8	n.a.	42.1	40.3	n.a.	n.a.	1.8	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	76.9	74.8	77.3	*-2.5***	**2.1***	-0.4	75.2	74.0	79.9	*-5.8***	1.2	*-4.7**	4.3
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	15.6	14.0	n.a.	n.a.	1.6	n.a.	16.6	11.8	n.a.	n.a.	4.8	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in table rows that we outlined with a black box are used for the composite measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

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Table B.4. The proportion of patients giving the best response in each of the three rounds of the CPC patient survey, sample of attributed Medicare FFS beneficiaries in New Jersey (percentage)

Question	Patients in CPC practices (NJ)					Patients in comparison practices (NJ)					DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Composite measures													
Timely appointments, care, and information (five questions)	53.2	53.3	51.4	1.9	-0.1	1.8	52.1	49.4	49.0	0.4	2.7	3.1	-1.3
Provider communication (six questions)	82.6	81.9	82.6	-0.7	0.7	0.0	81.4	83.1	80.5	2.5	-1.7	0.9	-0.9
Providers' knowledge of care the patient received from other providers (two questions)	75.4	74.2	74.4	-0.2	1.2	1.0	73.2	74.6	73.1	1.6	-1.4	0.1	0.9
Providers support patients in taking care of their own health (two questions)	51.4	47.6	44.3	**3.3*** **	**3.8*** **	**7.1*** **	47.4	40.7	43.7	-3.0	**6.7*** **	3.7	3.3
Providers discuss medication decisions with patients (three questions)	63.4	63.1	60.8	2.2	0.4	2.6	61.0	66.0	62.3	**3.7***	*-5.0**	-1.3	3.9
Patients' rating of the provider (one question)	78.1	77.2	77.0	0.3	0.9	1.1	76.0	80.9	75.0	**5.9****	*-4.9***	1.0	0.1
Individual questions													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	69.7	70.7	70.9	-0.2	-1.0	-1.2	70.5	70.0	65.9	4.1	0.5	4.6	-5.8
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	71.9	72.6	71.0	1.7	-0.8	0.9	70.8	70.5	68.3	2.2	0.4	2.6	-1.7
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	59.9	61.6	56.8	**4.8****	-1.7	3.1	58.7	53.7	55.7	-2.0	5.0	3.0	0.1

Table B.4. (*continued*)

	Patients in CPC practices (NJ)						Patients in comparison practices (NJ)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	55.0	54.4	56.3	-1.9	0.6	-1.2	63.3	45.3	38.8	6.5	**18.1****	**24.5*****	*-25.7****
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	30.8	28.5	25.7	**2.8****	2.3	**5.1*****	28.1	26.0	24.1	1.9	2.1	4.0	1.1
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	55.6	53.0	55.1	-2.1	2.6	0.5	50.8	52.1	52.8	-0.6	-1.4	-2.0	2.5
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	78.2	78.9	77.1	1.8	-0.7	1.1	73.4	76.1	76.0	0.1	-2.7	-2.6	3.7
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	43.9	43.6	40.5	3.0	0.4	3.4	33.2	39.0	39.6	-0.7	-5.7	-6.4	**9.8***
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	83.8	83.7	84.4	-0.6	0.0	-0.6	82.0	83.5	82.7	0.8	-1.5	-0.7	0.1
Q25: Provider always listened carefully to patient	85.7	84.9	86.4	-1.5	0.8	-0.8	84.8	84.5	84.6	-0.2	0.3	0.2	-0.9
Q27: When patient talked with provider about health questions and concerns, provider always gave the patient easy-to-understand information	81.1	79.4	82.6	*-3.1****	1.6	-1.5	80.1	80.8	80.3	0.6	-0.8	-0.2	-1.3

Table B.4. (*continued*)

	Patients in CPC practices (NJ)						Patients in comparison practices (NJ)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q28: Provider always seemed to know important information about patient's medical history	76.8	75.8	76.5	-0.7	1.0	0.3	75.4	77.5	74.5	3.0	-2.1	0.9	-0.6
Q29: Provider always showed respect for what patient had to say	89.1	89.7	90.1	-0.4	-0.7	-1.0	89.4	90.9	88.1	**2.8***	-1.5	1.3	-2.3
Q30: Provider always spent enough time with patient	80.7	78.8	77.8	1.0	1.9	**2.9****	80.3	82.5	73.6	**8.9*****	-2.2	**6.7*****	-3.8
Q38: Patient always felt that provider really cared about patient as a person	79.8	79.0	79.2	-0.2	0.8	0.6	79.8	81.3	76.7	**4.5***	-1.5	3.0	-2.5
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	78.1	70.6	58.1	12.5	7.5	**20.0****	64.0	66.8	60.8	6.0	-2.8	3.2	16.8
Q21: If provider's office used a web portal or website, patient used it often (more than 3 times) to email the practice, review medical information, request prescription renewal, or make appointments	7.6	6.6	n.a.	n.a.	0.9	n.a.	9.5	6.9	n.a.	n.a.	2.7	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	67.2	65.5	62.4	**3.2****	1.7	**4.8*****	60.6	60.1	58.4	1.7	0.5	2.3	2.6
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	78.0	75.5	75.1	0.5	**2.4***	**2.9****	72.3	74.3	70.8	3.6	-2.0	1.5	1.4
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	46.9	43.5	37.1	**6.4*****	**3.4****	**9.8*****	40.6	35.4	33.7	1.8	5.1	**6.9*****	2.9

Table B.4. (*continued*)

	Patients in CPC practices (NJ)						Patients in comparison practices (NJ)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	44.5	45.3	40.8	**4.5*** **	-0.8	**3.7** **	43.9	37.7	37.5	0.3	**6.2** **	**6.5** **	-2.8
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	29.1	31.6	29.6	**2.0***	*-2.4** *	-0.5	32.1	25.8	27.8	-2.0	**6.2** **	**4.2***	*-4.7**
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	65.9	65.4	61.7	**3.7** **	0.5	**4.2*** **	63.8	64.5	55.6	**8.9*** **	-0.7	**8.1** **	-4.0
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	84.0	82.1	79.5	**2.7***	**1.9***	**4.5*** **	83.1	81.7	76.5	**5.2** **	1.3	**6.5*** **	-2.0
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	58.1	56.1	58.7	-2.6	2.0	-0.6	59.0	58.2	54.7	3.5	0.8	4.4	-4.9
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	87.6	87.4	85.5	**1.9** **	0.2	2.0	83.5	85.7	84.8	0.8	-2.2	-1.4	3.4
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	73.5	72.9	79.1	-6.2	0.5	*-5.6** *	75.8	74.0	82.9	*-8.9** *	1.7	-7.2	1.5
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	54.5	55.9	54.3	1.6	-1.4	0.3	57.9	53.5	54.8	-1.3	4.4	3.1	-2.9

Table B.4. (*continued*)

	Patients in CPC practices (NJ)						Patients in comparison practices (NJ)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	5.5	6.9	6.9	0.0	*-1.4**	*-1.3**	7.7	10.6	6.6	**4.0*** **	*-3.0**	1.1	*-2.4**
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	15.5	16.5	16.9	-0.4	-1.0	-1.4	16.3	16.2	20.7	*-4.4***	0.0	*-4.4**	3.0
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	56.8	58.5	59.6	-1.1	-1.7	-2.9	58.7	61.3	61.0	0.3	-2.6	-2.3	-0.5
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	n.a.	n.a.	68.1	n.a.	n.a.	n.a.	n.a.	n.a.	57.7	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	n.a.	n.a.	93.7	n.a.	n.a.	n.a.	n.a.	n.a.	95.7	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	58.4	63.7	n.a.	n.a.	-5.3	n.a.	63.9	55.5	n.a.	n.a.	8.3	n.a.	n.a.

Table B.4. (*continued*)

	Patients in CPC practices (NJ)						Patients in comparison practices (NJ)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	53.4	59.5	n.a.	n.a.	*-6.1**	n.a.	53.9	54.9	n.a.	n.a.	-0.9	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	66.2	60.6	58.0	**2.6***	**5.6*****	**8.3*****	61.9	54.8	56.0	-1.2	**7.1*****	**5.9****	2.4
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	35.8	34.0	30.2	**3.8*****	1.8	**5.6*****	32.8	26.1	30.4	-4.2	**6.7*****	2.5	3.2
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	75.8	n.a.	n.a.	n.a.	n.a.	n.a.	70.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	64.7	64.7	61.2	**3.5***	0.0	3.6	65.2	66.8	60.0	**6.8****	-1.6	5.2	-1.6
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	46.2	44.7	44.1	0.5	1.5	2.0	40.4	51.5	44.8	**6.7****	*-11.1****	-4.4	6.5
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	79.2	80.3	78.1	2.2	-1.1	1.1	76.2	79.0	80.7	-1.7	-2.9	-4.5	5.6

Table B.4. (*continued*)

	Patients in CPC practices (NJ)						Patients in comparison practices (NJ)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	37.5	36.0	n.a.	n.a.	1.5	n.a.	39.2	34.0	n.a.	n.a.	5.3	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	40.2	38.8	n.a.	n.a.	1.3	n.a.	28.7	31.8	n.a.	n.a.	-3.1	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	78.1	77.2	77.0	0.3	0.9	1.1	76.0	80.9	75.0	**5.9****	*-4.9***	1.0	0.1
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	17.8	17.9	n.a.	n.a.	-0.1	n.a.	16.5	16.9	n.a.	n.a.	-0.4	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in table rows that we outlined with a black box are used for the composite measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

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Table B.5. The proportion of patients giving the best response in each of the three rounds of the CPC patient survey, sample of attributed Medicare FFS beneficiaries in New York (percentage)

Question	Patients in CPC practices (NY)						Patients in comparison practices (NY)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Composite measures													
Timely appointments, care, and information (five questions)	56.8	55.6	55.2	0.4	1.1	1.5	55.5	55.6	59.8	*-4.3***	-0.1	*-4.3***	**5.9*****
Provider communication (six questions)	82.4	83.0	81.5	**1.5****	-0.6	0.9	84.0	81.0	82.7	-1.7	**3.0****	1.3	-0.4
Providers' knowledge of care the patient received from other providers (two questions)	76.6	75.9	75.6	0.3	0.7	1.0	77.7	74.5	77.3	*-2.7**	**3.1****	0.4	0.6
Providers support patients in taking care of their own health (two questions)	51.0	47.7	45.2	**2.5*****	**3.2****	**5.7*****	53.5	50.1	51.7	-1.6	3.3	1.8	4.0
Providers discuss medication decisions with patients (three questions)	61.9	63.0	62.4	0.5	-1.1	-0.5	66.0	60.6	63.4	-2.9	**5.4*****	2.5	-3.0
Patients' rating of the provider (one question)	78.7	78.8	76.5	**2.3****	-0.1	**2.2****	82.3	77.7	77.2	0.4	**4.6****	**5.0****	-2.8
Individual questions													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	72.3	75.4	73.4	2.0	*-3.1***	-1.2	73.5	73.8	77.0	-3.2	-0.3	-3.5	2.3
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	74.0	74.7	74.9	-0.2	-0.8	-0.9	75.6	73.7	78.4	*-4.7***	1.9	-2.8	1.8
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	62.9	60.4	63.6	-3.1	2.4	-0.7	67.0	68.0	69.4	-1.3	-1.0	-2.3	1.6

Table B.5. (*continued*)

Question	Patients in CPC practices (NY)						Patients in comparison practices (NY)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	61.7	60.9	49.4	**11.4***	0.9	**12.3****	68.0	66.6	58.3	8.3	1.4	9.7	2.6
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	33.6	29.9	29.8	0.1	**3.6*****	**3.7****	29.1	28.2	31.3	-3.1	0.9	-2.2	**5.9***
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	58.8	57.8	57.1	0.7	1.0	1.7	52.9	51.5	50.9	0.6	1.4	2.0	-0.3
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	78.6	78.6	77.5	1.1	0.1	1.1	83.5	80.1	80.9	-0.8	**3.4***	2.6	-1.5
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	36.9	39.4	36.4	3.0	-2.5	0.5	36.7	38.4	40.2	-1.8	-1.7	-3.4	4.0
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	83.5	85.0	82.9	**2.1****	*-1.4**	0.6	85.4	82.0	83.3	-1.3	**3.4***	2.1	-1.4
Q25: Provider always listened carefully to patient	84.4	85.5	84.3	1.2	-1.1	0.1	86.7	84.5	84.9	-0.5	2.3	1.8	-1.7
Q27: When patient talked with provider about health questions and concerns, provider always gave the patient easy-to-understand information	80.9	80.6	81.5	-0.9	0.3	-0.6	81.5	78.0	80.2	-2.2	3.4	1.3	-1.9

Table B.5. (*continued*)

	Patients in CPC practices (NY)						Patients in comparison practices (NY)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q28: Provider always seemed to know important information about patient's medical history	77.8	78.4	76.9	1.5	-0.6	0.9	78.0	75.6	78.4	-2.8	2.4	-0.4	1.3
Q29: Provider always showed respect for what patient had to say	88.5	90.0	88.8	1.3	*-1.6***	-0.3	91.6	89.7	89.7	0.0	2.0	1.9	-2.2
Q30: Provider always spent enough time with patient	79.6	79.2	77.3	1.9	0.3	**2.2**** [a]	82.3	77.5	79.4	-2.0	**4.9**** [a]	2.9	-0.6
Q38: Patient always felt that provider really cared about patient as a person	81.1	81.0	79.1	**1.9**** [a]	0.1	**2.0**** [a]	82.4	79.0	81.8	-2.8	**3.4*** [a]	0.6	1.4
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	75.0	69.9	68.2	1.7	5.1	6.9	85.5	88.4	59.1	**29.3**** [a]	-2.9	**26.4**** [a]	-19.6
Q21: If provider's office used a web portal or website, patient used it often (more than 3 times) to email the practice, review medical information, request prescription renewal, or make appointments	9.8	7.5	n.a.	n.a.	**2.4*** [a]	n.a.	10.8	6.9	n.a.	n.a.	3.8	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	69.3	72.1	68.5	**3.6***** [a]	*-2.7***	0.8	70.0	72.6	72.9	-0.3	-2.6	-2.9	3.8
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	72.8	72.0	71.8	0.3	0.8	1.0	73.7	72.7	76.5	-3.8	1.0	-2.8	3.8
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	43.5	40.1	36.6	**3.5**** [a]	**3.4**** [a]	**6.8***** [a]	47.3	46.5	42.2	4.3	0.8	5.1	1.7

Table B.5. (*continued*)

	Patients in CPC practices (NY)						Patients in comparison practices (NY)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	43.8	43.9	41.8	**2.1*** [a]	-0.1	2.0	46.4	49.6	45.4	4.1	-3.2	0.9	1.1
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	28.3	30.3	30.7	-0.4	-2.1	*-2.5**	30.8	32.1	33.2	-1.1	-1.3	-2.4	-0.1
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	68.0	65.1	66.0	-0.8	**2.8**** [a]	2.0	70.5	66.4	73.4	*-7.0****	**4.1*** [a]	-2.9	**4.9*** [a]
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	83.6	84.2	81.8	**2.4**** [a]	-0.7	1.8	87.5	86.0	86.3	-0.3	1.5	1.2	0.6
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	63.0	60.4	59.7	0.7	**2.6*** [a]	**3.3***** [a]	63.4	60.3	64.8	-4.5	3.1	-1.4	4.8
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	87.1	87.4	87.0	0.4	-0.3	0.1	87.4	85.7	86.3	-0.6	1.7	1.1	-1.0
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	78.5	78.0	77.2	0.8	0.5	1.3	74.1	79.1	80.8	-1.6	-5.0	*-6.7**	**8.0*** [a]
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	53.4	55.1	56.3	-1.2	-1.7	*-2.9***	57.1	56.5	59.4	-2.9	0.7	-2.2	-0.7

Table B.5. (*continued*)

	Patients in CPC practices (NY)						Patients in comparison practices (NY)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	7.2	7.2	6.5	0.7	0.0	0.7	6.1	9.0	7.6	1.4	*-2.9***	-1.5	2.2
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	16.7	17.6	18.6	-1.0	-0.9	-1.9	15.7	19.5	18.1	1.4	*-3.8**	-2.5	0.5
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	55.9	55.9	57.7	-1.8	0.0	-1.8	60.2	56.0	64.3	*-8.3****	4.2	-4.1	2.3
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	n.a.	n.a.	68.3	n.a.	n.a.	n.a.	n.a.	n.a.	71.0	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	n.a.	n.a.	95.7	n.a.	n.a.	n.a.	n.a.	n.a.	98.9	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	55.8	51.8	n.a.	n.a.	4.1	n.a.	53.2	58.5	n.a.	n.a.	-5.2	n.a.	n.a.

Table B.5. (*continued*)

	Patients in CPC practices (NY)						Patients in comparison practices (NY)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	61.1	51.1	n.a.	n.a.	**9.9*** [a]**	n.a.	57.3	59.4	n.a.	n.a.	-2.1	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	64.8	60.0	58.6	1.4	**4.8*** [a]**	**6.2*** [a]**	66.5	62.6	64.4	-1.7	3.9	2.2	4.0
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	36.7	35.1	31.3	**3.8*** [a]**	1.6	**5.5*** [a]**	40.1	37.2	39.1	-1.8	2.8	1.0	4.5
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	76.5	n.a.	n.a.	n.a.	n.a.	n.a.	78.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	63.1	64.9	63.2	1.7	-1.7	-0.1	66.1	64.0	65.6	-1.5	2.1	0.6	-0.6
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	43.2	46.5	45.7	0.8	-3.3	-2.5	50.1	41.2	46.3	*-5.1**	**8.9*** [a]**	3.8	-6.3
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	79.9	78.1	79.4	-1.3	1.8	0.5	81.9	77.0	79.4	-2.4	**4.9** [a]**	2.4	-2.0

Table B.5. (*continued*)

Question	Patients in CPC practices (NY) 2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	Patients in comparison practices (NY) 2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	36.7	37.2	n.a.	n.a.	-0.5	n.a.	41.4	39.9	n.a.	n.a.	1.4	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	42.0	41.8	n.a.	n.a.	0.2	n.a.	41.2	38.8	n.a.	n.a.	2.4	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	78.7	78.8	76.5	**2.3**** [a]	-0.1	**2.2**** [a]	82.3	77.7	77.2	0.4	**4.6**** [a]	**5.0**** [a]	-2.8
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	15.6	17.8	n.a.	n.a.	*-2.2***	n.a.	15.3	14.6	n.a.	n.a.	0.7	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in table rows that we outlined with a black box are used for the composite measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

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Table B.6. The proportion of patients giving the best response in each of the three rounds of the CPC patient survey, sample of attributed Medicare FFS beneficiaries in Ohio/Kentucky (percentage)

Question	Patients in CPC practices (OH/KY)					Patients in comparison practices (OH/KY)					DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Composite measures													
Timely appointments, care, and information (five questions)	56.5	56.4	54.1	**2.4*** **	0.1	**2.4*** **	58.0	55.5	55.4	0.2	2.5	2.6	-0.2
Provider communication (six questions)	81.7	82.1	79.9	**2.2** **	-0.3	**1.9** **	82.8	81.4	80.1	1.3	1.5	2.8	-0.9
Providers' knowledge of care the patient received from other providers (two questions)	77.8	76.9	75.2	**1.7***	0.9	**2.6** **	76.9	78.2	76.2	2.0	-1.3	0.7	1.8
Providers support patients in taking care of their own health (two questions)	50.1	46.3	44.5	1.8	**3.8*** **	**5.6*** **	52.3	46.2	46.8	-0.6	**6.1*** **	**5.5** **	0.1
Providers discuss medication decisions with patients (three questions)	62.0	61.1	58.4	**2.6*** **	1.0	**3.6*** **	62.7	59.9	62.1	-2.2	2.8	0.6	3.0
Patients' rating of the provider (one question)	79.5	78.1	75.5	**2.7*** **	1.4	**4.1*** **	80.2	78.2	76.6	1.5	2.1	**3.6***	0.5
Individual questions													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	69.4	69.1	69.3	-0.2	0.3	0.1	69.7	67.5	71.0	-3.5	2.2	-1.2	1.4
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	75.3	77.1	72.4	**4.7*** **	-1.8	**2.9** **	75.3	76.0	74.9	1.1	-0.7	0.5	2.5
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	60.4	63.9	60.9	3.0	-3.5	-0.5	64.5	60.9	63.7	-2.8	3.6	0.9	-1.4

Table B.6. (*continued*)

Question	Patients in CPC practices (OH/KY)						Patients in comparison practices (OH/KY)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	59.8	57.7	54.8	3.0	2.1	5.1	64.8	58.7	58.1	0.6	6.0	6.7	-1.6
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	34.0	31.3	28.6	**2.8*** **	**2.6** **	**5.4*** **	37.0	34.0	29.8	4.1	3.1	**7.2** **	-1.8
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	45.5	42.8	42.2	0.6	2.7	**3.4***	46.6	41.8	46.1	-4.3	4.7	0.4	2.9
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	81.4	79.4	77.9	**1.5***	**2.0***	**3.6*** **	81.8	82.2	80.4	1.8	-0.3	1.4	2.1
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	37.1	32.7	32.6	0.1	4.4	4.5	37.1	32.2	32.2	-0.1	4.9	4.9	-0.4
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	83.4	83.3	81.9	1.5	0.0	1.5	85.1	82.6	81.9	0.8	2.5	3.3	-1.8
Q25: Provider always listened carefully to patient	83.4	83.7	82.6	1.1	-0.3	0.8	83.7	83.8	82.3	1.5	-0.1	1.4	-0.6
Q27: When patient talked with provider about health questions and concerns, provider always gave the patient easy-to-understand information	80.1	79.0	77.9	1.0	1.2	**2.2***	81.9	79.3	79.0	0.3	2.5	2.8	-0.6

Table B.6. (*continued*)

Question	Patients in CPC practices (OH/KY)						Patients in comparison practices (OH/KY)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q28: Provider always seemed to know important information about patient's medical history	77.7	79.5	76.1	**3.3*** **	-1.8	1.6	79.8	76.5	75.2	1.3	3.3	**4.6** **	-3.0
Q29: Provider always showed respect for what patient had to say	88.5	88.9	86.6	**2.2** **	-0.4	**1.9** **	89.6	88.6	87.0	1.6	1.0	2.6	-0.7
Q30: Provider always spent enough time with patient	78.0	78.8	74.7	**4.1*** **	-0.9	**3.3***	77.9	78.5	76.0	2.4	-0.6	1.8	1.5
Q38: Patient always felt that provider really cared about patient as a person	79.6	81.0	77.5	**3.6*** **	-1.4	**2.1***	81.8	79.4	78.1	1.3	2.4	3.7	-1.5
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	79.4	79.4	69.2	**10.2** **	0.0	**10.2** **	79.0	75.6	74.0	1.6	3.4	5.0	5.2
Q21: If provider's office used a web portal or website, patient used it often (more than 3 times) to email the practice, review medical information, request prescription renewal, or make appointments	18.0	16.9	n.a.	n.a.	1.1	n.a.	21.2	19.4	n.a.	n.a.	1.9	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	70.6	70.3	67.0	**3.3** **	0.2	**3.6** **	72.2	68.0	69.8	-1.7	4.2	2.5	1.1
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	79.4	78.2	78.5	-0.3	1.1	0.8	79.2	80.5	78.3	2.1	-1.3	0.9	0.0
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	39.1	39.8	34.9	**4.9*** **	-0.7	**4.2*** **	44.9	43.5	42.9	0.6	1.4	1.9	2.3

Table B.6. (*continued*)

Question	Patients in CPC practices (OH/KY)						Patients in comparison practices (OH/KY)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	40.0	41.3	38.4	**2.9*** **	-1.3	1.6	43.4	45.5	42.5	3.0	-2.1	0.9	0.7
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	25.9	28.5	27.7	0.9	-2.6***	-1.7	27.4	30.9	31.3	-0.5	-3.4	-3.9	2.2
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	71.0	69.5	66.8	**2.8****	1.5	**4.2*****	72.0	69.5	64.5	**5.0***	2.5	**7.5*****	-3.3
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	86.2	84.8	82.9	**2.0****	1.4	**3.3*****	87.9	86.6	82.1	**4.5****	1.3	**5.8*****	-2.4
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	61.8	61.3	58.3	**3.0****	0.5	**3.5***	63.4	66.3	63.0	3.3	-2.9	0.4	3.1
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	88.4	86.8	85.4	1.4	**1.6***	**3.0*****	85.9	86.2	84.1	2.2	-0.3	1.9	1.1
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	76.2	78.1	79.5	-1.4	-1.9	-3.3	77.4	77.1	79.4	-2.3	0.3	-2.0	-1.3
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	55.5	54.0	55.4	-1.3	1.5	0.2	54.7	58.4	55.1	3.4	-3.7	-0.4	0.5

Table B.6. (*continued*)

	Patients in CPC practices (OH/KY)						Patients in comparison practices (OH/KY)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	6.2	8.1	6.8	**1.3***	*-1.9***	-0.6	6.5	9.3	6.5	**2.8****	*-2.7***	0.1	-0.6
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	20.6	22.0	24.3	-2.3	-1.4	*-3.7****	18.7	21.6	25.5	-3.8	-3.0	*-6.8****	3.1
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	57.1	57.3	57.4	-0.1	-0.2	-0.2	61.7	59.9	61.0	-1.1	1.8	0.7	-0.9
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	n.a.	n.a.	69.4	n.a.	n.a.	n.a.	n.a.	n.a.	63.3	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	n.a.	n.a.	94.8	n.a.	n.a.	n.a.	n.a.	n.a.	95.7	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	60.5	55.1	n.a.	n.a.	**5.4****	n.a.	58.4	54.7	n.a.	n.a.	3.7	n.a.	n.a.

Table B.6. (*continued*)

Question	Patients in CPC practices (OH/KY)						Patients in comparison practices (OH/KY)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	60.5	55.0	n.a.	n.a.	**5.5****	n.a.	58.3	47.0	n.a.	n.a.	**11.3*****	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	65.1	58.0	57.8	0.3	**7.1*****	**7.4*****	66.7	56.3	60.1	-3.9	**10.5*****	**6.6*****	0.7
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	34.7	34.3	31.1	**3.3*****	0.3	**3.6*****	38.0	36.0	33.6	2.4	2.0	**4.4***	-0.8
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	71.6	n.a.	n.a.	n.a.	n.a.	n.a.	78.7	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	64.1	61.4	60.1	1.3	**2.6***	**3.9****	67.0	61.1	63.3	-2.2	**5.9****	3.6	0.3
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	44.1	43.0	42.7	0.3	1.1	1.4	44.4	43.2	46.3	-3.1	1.2	-1.9	3.4
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	78.1	79.1	72.6	**6.5*****	-1.0	**5.5*****	78.2	76.5	78.1	-1.7	1.7	0.1	**5.4***

Table B.6. (*continued*)

Question	Patients in CPC practices (OH/KY)						Patients in comparison practices (OH/KY)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	33.2	34.0	n.a.	n.a.	-0.8	n.a.	39.6	38.4	n.a.	n.a.	1.2	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	48.5	46.5	n.a.	n.a.	2.0	n.a.	51.3	47.2	n.a.	n.a.	4.1	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	79.5	78.1	75.5	**2.7*** **	1.4	4.1***	80.2	78.2	76.6	1.5	2.1	**3.6***	0.5
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	18.0	18.8	n.a.	n.a.	-0.8	n.a.	19.7	21.9	n.a.	n.a.	-2.2	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in table rows that we outlined with a black box are used for the composite measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

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Table B.7. The proportion of patients giving the best response in each of the three rounds of the CPC patient survey, sample of attributed Medicare FFS beneficiaries in Oklahoma (percentage)

Question	Patients in CPC practices (OK)						Patients in comparison practices (OK)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Composite measures													
Timely appointments, care, and information (five questions)	48.9	49.6	50.4	-0.8	-0.7	-1.5	51.3	49.8	53.7	-3.9	1.4	-2.4	0.9
Provider communication (six questions)	76.6	76.2	77.4	-1.2	0.4	-0.8	80.9	79.0	80.6	-1.6	1.9	0.3	-1.1
Providers' knowledge of care the patient received from other providers (two questions)	77.0	75.9	76.1	-0.2	1.1	0.9	74.3	77.9	76.4	1.5	*-3.6**	-2.1	2.9
Providers support patients in taking care of their own health (two questions)	50.3	46.0	45.1	0.9	**4.2*** **	**5.2*** **	48.8	45.1	44.7	0.4	**3.7***	**4.1***	1.1
Providers discuss medication decisions with patients (three questions)	59.2	57.8	58.5	-0.7	1.4	0.7	61.5	59.9	61.2	-1.2	1.6	0.3	0.3
Patients' rating of the provider (one question)	72.1	71.3	73.0	-1.7	0.8	-0.9	75.1	74.9	73.1	1.8	0.2	2.0	-2.9
Individual questions													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	60.7	63.7	62.6	1.1	-3.1	-2.0	63.2	63.3	68.0	-4.8	0.1	-4.8	2.9
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	69.4	69.7	71.9	-2.3	-0.2	-2.5	71.5	69.2	75.1	*-5.9**	2.3	-3.7	1.2
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	52.0	54.1	56.0	-1.9	-2.1	-4.0	54.9	52.6	57.4	-4.8	2.3	-2.5	-1.4

Table B.7. (*continued*)

	Patients in CPC practices (OK)						Patients in comparison practices (OK)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	48.4	45.2	53.5	-8.3	3.2	-5.1	65.0	53.4	31.1	**22.2*** **	11.7	**33.9*** **	*-39.0*** **
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	26.3	26.2	26.4	-0.2	0.2	-0.1	29.5	26.1	28.3	-2.2	3.4	1.2	-1.3
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	36.7	33.8	37.6	*-3.8**	2.9	-0.9	31.5	39.7	45.2	-5.5	*-8.2***	*-13.7*** **	**12.8*** **
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	78.9	77.0	77.8	-0.8	1.9	1.1	76.2	78.6	76.4	2.3	-2.4	-0.2	1.3
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	24.7	31.4	28.3	3.1	*-6.7***	-3.6	16.9	24.3	20.6	3.7	-7.5	-3.7	0.2
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	78.4	77.8	78.7	-0.9	0.6	-0.3	81.0	80.1	80.3	-0.2	0.9	0.6	-0.9
Q25: Provider always listened carefully to patient	79.3	78.2	80.6	*-2.3***	1.0	-1.3	83.9	82.2	82.5	-0.3	1.7	1.4	-2.7
Q27: When patient talked with provider about health questions and concerns, provider always gave patient easy-to-understand information	75.5	74.6	76.7	-2.2	0.9	-1.2	80.9	77.8	82.2	*-4.4***	3.1	-1.3	0.0

Table B.7. (*continued*)

	Patients in CPC practices (OK)						Patients in comparison practices (OK)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q28: Provider always seemed to know important information about patient's medical history	71.2	70.4	71.3	-1.0	0.9	-0.1	75.3	70.5	73.1	-2.6	4.8	2.2	-2.3
Q29: Provider always showed respect for what patient had to say	84.0	83.6	85.5	*-1.9***	0.4	-1.5	88.3	86.7	87.1	-0.4	1.6	1.2	-2.7
Q30: Provider always spent enough time with patient	72.8	73.6	73.2	0.4	-0.7	-0.3	78.0	77.5	78.3	-0.8	0.5	-0.3	0.0
Q38: Patient always felt that provider really cared about patient as a person	74.6	74.1	76.3	*-2.2**	0.5	-1.7	80.8	76.5	78.5	-1.9	4.2	2.3	-3.9
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	68.9	78.5	70.1	8.4	-9.6	-1.2	70.9	65.9	63.9	2.1	5.0	7.1	-8.3
Q21: If provider's office used a web portal or website, patient used it often (more than 3 times) to email the practice, review medical information, request prescription renewal, or make appointments	13.1	6.2	n.a.	n.a.	**6.9*****	n.a.	20.3	17.2	n.a.	n.a.	3.1	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	73.1	70.1	70.0	0.1	**3.0****	**3.1****	66.3	68.8	65.1	3.8	-2.5	1.2	1.9
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	73.7	75.0	76.4	-1.4	-1.3	*-2.7**	75.9	75.3	80.6	*-5.3**	0.6	*-4.7**	2.0
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	43.7	43.8	40.0	**3.8*****	-0.1	**3.8****	38.5	39.5	30.5	**9.0*****	-1.0	**8.0****	-4.2

Table B.7. (*continued*)

	Patients in CPC practices (OK)						Patients in comparison practices (OK)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	40.3	42.3	40.4	1.9	-1.9	-0.1	38.1	37.7	38.3	-0.6	0.4	-0.2	0.1
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	26.7	27.7	28.0	-0.3	-1.0	-1.3	26.2	24.1	25.9	-1.8	2.1	0.3	-1.7
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	67.5	64.8	66.4	-1.5	2.7	1.1	70.4	65.5	67.7	-2.2	**4.9***	2.7	-1.6
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	82.3	82.1	81.1	1.1	0.2	1.2	84.5	79.4	82.9	-3.5	**5.1****	1.6	-0.3
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	58.4	57.1	58.1	-1.1	1.3	0.3	59.5	59.4	59.1	0.3	0.1	0.4	-0.1
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	87.7	87.0	86.6	0.4	0.7	1.1	83.6	88.2	87.1	1.1	*-4.7***	-3.6	**4.7***
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	69.4	71.8	74.1	-2.3	-2.4	*-4.7***	68.0	63.1	75.3	*-12.3***	4.9	*-7.4**	2.7
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	58.0	55.8	56.4	-0.6	2.2	1.6	58.5	59.0	59.9	-0.9	-0.6	-1.5	3.1

Table B.7. (*continued*)

	Patients in CPC practices (OK)						Patients in comparison practices (OK)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	9.2	10.9	9.9	0.9	-1.6	-0.7	8.4	8.5	9.4	-1.0	-0.1	-1.0	0.3
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	22.4	23.4	26.0	-2.6	-1.0	*-3.5***	21.0	26.3	21.8	**4.5***	*-5.3***	-0.8	-2.7
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	58.5	58.5	58.2	0.3	0.0	0.3	58.4	62.6	60.9	1.7	-4.2	-2.5	2.8
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	n.a.	n.a.	72.5	n.a.	n.a.	n.a.	n.a.	n.a.	57.1	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	n.a.	n.a.	94.3	n.a.	n.a.	n.a.	n.a.	n.a.	95.9	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	55.7	54.8	n.a.	n.a.	1.0	n.a.	41.7	45.1	n.a.	n.a.	-3.4	n.a.	n.a.

Table B.7. (*continued*)

	Patients in CPC practices (OK)						Patients in comparison practices (OK)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	50.8	50.9	n.a.	n.a.	-0.1	n.a.	42.8	38.6	n.a.	n.a.	4.2	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	65.0	57.8	57.1	0.6	**7.2*** **	**7.9*** **	61.6	54.8	57.0	-2.2	**6.8** **	4.6	3.2
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	35.3	34.0	33.2	0.8	1.3	2.1	35.7	35.1	32.5	2.6	0.6	3.2	-1.1
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	69.2	n.a.	n.a.	n.a.	n.a.	n.a.	67.8	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	58.7	57.4	57.5	-0.1	1.3	1.1	64.9	60.6	62.1	-1.6	4.4	2.8	-1.7
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	44.3	41.9	43.8	-1.9	2.4	0.5	46.5	42.5	45.0	-2.5	4.0	1.5	-1.0
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	75.1	74.6	74.8	-0.2	0.5	0.3	73.7	76.8	75.5	1.3	-3.1	-1.8	2.1

Table B.7. (*continued*)

Question	Patients in CPC practices (OK)						Patients in comparison practices (OK)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	34.4	34.2	n.a.	n.a.	0.1	n.a.	34.3	35.1	n.a.	n.a.	-0.8	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	42.8	43.9	n.a.	n.a.	-1.2	n.a.	49.6	39.7	n.a.	n.a.	**9.9***	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	72.1	71.3	73.0	-1.7	0.8	-0.9	75.1	74.9	73.1	1.8	0.2	2.0	-2.9
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	20.1	20.8	n.a.	n.a.	-0.7	n.a.	19.3	21.9	n.a.	n.a.	-2.5	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in table rows that we outlined with a black box are used for the composite measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

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Table B.8. The proportion of patients giving the best response in each of the three rounds of the CPC patient survey, sample of attributed Medicare FFS beneficiaries in Oregon (percentage)

Question	Patients in CPC practices (OR)						Patients in comparison practices (OR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Composite measures													
Timely appointments, care, and information (five questions)	50.5	52.5	52.2	0.3	*-2.0**	-1.7	51.6	51.4	53.8	-2.4	0.2	-2.2	0.5
Provider communication (six questions)	77.9	78.6	78.2	0.4	-0.7	-0.3	78.5	78.7	79.8	-1.1	-0.1	-1.3	1.0
Providers' knowledge of care the patient received from other providers (two questions)	76.2	77.3	77.0	0.3	-1.1	-0.8	78.5	77.4	78.8	-1.4	1.1	-0.3	-0.4
Providers support patients in taking care of their own health (two questions)	53.2	50.2	47.8	2.4	**3.0****	**5.4*****	53.5	48.6	50.1	-1.6	**4.9****	3.3	2.0
Providers discuss medication decisions with patients (three questions)	60.3	62.6	61.1	1.5	-2.4	-0.8	63.7	62.2	62.4	-0.2	1.5	1.3	-2.1
Patients' rating of the provider (one question)	73.4	74.2	73.3	0.9	-0.8	0.1	70.6	73.3	75.6	-2.3	-2.7	*-5.0***	**5.1***
Individual questions													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	56.5	59.6	59.8	-0.2	*-3.1**	-3.4	55.1	57.4	58.6	-1.2	-2.3	-3.5	0.1
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	64.2	68.3	68.5	-0.2	*-4.1****	*-4.3***	62.3	63.6	67.1	-3.5	-1.3	*-4.8***	0.5
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	50.9	53.0	50.7	2.2	-2.1	0.2	52.9	55.6	55.7	-0.1	-2.7	-2.8	2.9

Table B.8. (*continued*)

Question	Patients in CPC practices (OR)						Patients in comparison practices (OR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	47.1	52.3	58.5	-6.1	-5.2	*-11.4**	44.1	55.9	63.6	-7.6	-11.9	*-19.5***	8.1
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	35.8	35.3	34.1	1.2	0.5	1.7	39.5	38.0	37.2	0.8	1.5	2.3	-0.6
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	35.9	34.6	33.6	1.0	1.3	2.3	31.7	33.1	35.5	-2.4	-1.4	-3.8	6.1
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	77.0	78.1	76.2	1.9	-1.1	0.8	75.8	76.3	79.9	-3.6	-0.5	*-4.1**	**4.9***
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	27.5	32.8	28.6	4.2	-5.3	-1.1	30.1	32.6	39.2	-6.6	-2.5	-9.1	8.0
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	80.6	81.1	79.6	1.5	-0.5	1.0	80.8	81.6	84.6	*-3.0**	-0.8	*-3.8**	**4.8****
Q25: Provider always listened carefully to patient	80.3	81.7	81.4	0.2	-1.4	-1.1	82.9	83.6	83.7	-0.1	-0.7	-0.8	-0.3
Q27: When patient talked with provider about health questions and concerns, provider always gave the patient easy-to-understand information	76.6	77.3	77.2	0.1	-0.7	-0.6	75.2	76.5	79.3	-2.8	-1.3	-4.1	3.5

Table B.8. (*continued*)

Question	Patients in CPC practices (OR)						Patients in comparison practices (OR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q28: Provider always seemed to know important information about patient's medical history	70.7	71.6	71.4	0.2	-0.9	-0.7	69.1	69.8	70.4	-0.6	-0.7	-1.3	0.6
Q29: Provider always showed respect for what patient had to say	85.5	85.4	85.2	0.2	0.1	0.3	86.4	85.4	86.6	-1.2	1.0	-0.2	0.5
Q30: Provider always spent enough time with patient	74.4	75.5	75.1	0.4	-1.1	-0.8	76.0	75.6	74.0	1.6	0.4	2.0	-2.8
Q38: Patient always felt that provider really cared about patient as a person	75.6	75.1	74.5	0.6	0.5	1.1	75.6	74.2	77.7	-3.5	1.4	-2.1	3.2
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	65.9	69.7	63.6	6.0	-3.7	2.3	78.8	70.3	76.1	-5.8	8.5	2.7	-0.4
Q21: If provider's office used a web portal or website, patient used it often (more than 3 times) to email the practice, review medical information, request prescription renewal, or make appointments	24.0	24.8	n.a.	n.a.	-0.8	n.a.	22.5	17.8	n.a.	n.a.	4.7	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	74.7	73.8	74.0	-0.2	0.9	0.7	77.1	78.1	77.4	0.8	-1.0	-0.2	0.9
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	73.7	76.1	77.3	-1.2	*-2.4**	*-3.6***	72.5	77.2	80.5	-3.3	-4.7	*-8.0***	4.4
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	49.5	47.3	42.2	**5.1*****	2.2	**7.3*****	45.4	42.0	42.6	-0.7	3.5	2.8	4.5

Table B.8. (*continued*)

	Patients in CPC practices (OR)						Patients in comparison practices (OR)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	46.8	48.5	43.9	**4.6*** **	-1.6	**2.9** **	43.2	44.2	46.6	-2.4	-1.0	-3.4	**6.3** **
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	32.1	33.6	33.2	0.4	-1.5	-1.1	30.0	32.6	32.9	-0.4	-2.5	-2.9	1.8
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	68.9	68.4	67.7	0.7	0.5	1.3	71.2	68.6	71.7	-3.1	2.7	-0.5	1.7
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	84.8	84.6	83.4	1.2	0.2	1.4	84.1	83.9	84.2	-0.3	0.2	-0.1	1.5
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	59.7	59.1	59.2	-0.1	0.6	0.5	60.4	58.7	61.7	-3.1	1.8	-1.3	1.8
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	86.6	88.5	87.5	0.9	-1.8	-0.9	89.5	87.7	88.6	-0.9	1.8	0.9	-1.8
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	74.3	79.7	74.8	**4.9** **	*-5.5** *	-0.6	74.4	75.2	80.7	*-5.5**	-0.8	*-6.3**	5.7
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	55.2	57.5	54.7	2.8	-2.3	0.5	60.4	57.2	58.5	-1.3	3.2	1.9	-1.4

Table B.8. (*continued*)

	Patients in CPC practices (OR)						Patients in comparison practices (OR)						
Question	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	DD estimate, 2013 to 2015 (pp)
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	8.8	11.9	11.1	0.8	*-3.1****	*-2.3**	9.4	11.4	10.3	1.1	-2.0	-0.9	-1.4
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	18.3	18.0	20.3	-2.3	0.3	-2.0	22.6	19.3	21.2	-2.0	3.3	1.3	-3.3
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	56.5	54.6	56.2	-1.7	1.9	0.3	55.7	58.3	69.9	-1.6	-2.6	-4.2	4.4
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	n.a.	n.a.	67.7	n.a.	n.a.	n.a.	n.a.	n.a.	66.0	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	n.a.	n.a.	94.4	n.a.	n.a.	n.a.	n.a.	n.a.	92.1	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	61.9	57.1	n.a.	n.a.	4.8	n.a.	49.0	54.4	n.a.	n.a.	-5.5	n.a.	n.a.

Table B.8. (*continued*)

Question	Patients in CPC practices (OR)						Patients in comparison practices (OR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	60.8	56.0	n.a.	n.a.	**4.8***	n.a.	44.3	50.1	n.a.	n.a.	-5.7	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	67.0	62.8	60.6	2.2	**4.2*****	**6.3*****	67.4	60.5	63.5	-2.9	**6.8*****	3.9	2.5
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	39.1	37.2	34.4	**2.8***	1.9	**4.7*****	39.5	36.4	36.8	-0.4	3.1	2.7	2.0
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	73.6	n.a.	n.a.	n.a.	n.a.	n.a.	72.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	59.9	64.1	62.7	1.4	*-4.2***	-2.8	67.0	66.1	64.4	1.6	0.9	2.5	-5.3
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	42.2	44.6	43.6	1.0	-2.4	-1.4	41.4	42.6	45.1	-2.5	-1.2	-3.7	2.3
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	78.8	79.7	77.9	1.8	-0.9	0.9	83.0	80.0	78.1	1.9	3.0	4.9	-4.0

Table B.8. (*continued*)

Question	Patients in CPC practices (OR)						Patients in comparison practices (OR)						DD estimate, 2013 to 2015 (pp)
	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	2015	2014	2013	2013 to 2014 (pp)	2014 to 2015 (pp)	2013 to 2015 (pp)	
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	36.4	37.3	n.a.	n.a.	-0.9	n.a.	41.0	39.4	n.a.	n.a.	1.6	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	57.9	57.9	n.a.	n.a.	0.0	n.a.	51.1	52.8	n.a.	n.a.	-1.6	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	73.4	74.2	73.3	0.9	-0.8	0.1	70.6	73.3	75.6	-2.3	-2.7	-5.0	**5.1***
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	14.1	14.3	n.a.	n.a.	-0.2	n.a.	17.7	12.4	n.a.	n.a.	**5.3*** **	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in table rows that we outlined with a black box are used for the composite measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

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Table B.9. Regression-adjusted mean responses, sample of attributed Medicare FFS beneficiaries CPC-wide

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015
	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	
Composite measures (standardized means, 0-1)													
Timely appointments, care, and information (five questions)	0.834	0.836	0.833	**0.003***	-0.002	0.001	0.832	0.833	0.837	-0.004	-0.001	-0.005	0.006
Provider communication (six questions)	0.939	0.939	0.938	0.000	0.000	0.001	0.942	0.941	0.941	-0.001	0.001	0.001	0.000
Providers' knowledge of care the patient received from other providers (two questions)	0.866	0.864	0.859	**0.005***	0.002	**0.007****	0.864	0.859	0.861	-0.002	0.005	0.003	0.004
Providers support patients in taking care of their own health (two questions)	0.515	0.479	0.460	**0.018*****	**0.036*****	**0.055*****	0.521	0.463	0.481	*-0.019***	**0.058*****	**0.039*****	0.015
Providers discuss medication decisions with patients (three questions)	0.817	0.820	0.812	**0.008*****	-0.003	0.005	0.830	0.817	0.827	-0.010	**0.012****	0.003	0.002
Patients' rating of the provider (one question)	0.910	0.908	0.906	0.002	0.002	**0.004****	0.913	0.910	0.912	-0.002	0.003	0.001	0.003
Individual questions (standardized means, 0-1)													
Timely appointments, care, and information													
Q7: Patient always got appointment as soon as needed when s/he phoned provider's office to get an appointment for care needed right away	0.885	0.895	0.895	0.000	*-0.010****	*-0.010****	0.887	0.892	0.899	-0.007	-0.006	*-0.013***	0.002
Q10: Patient always got appointment as soon as needed when s/he made appointment for check-up or routine care	0.912	0.917	0.917	0.000	*-0.005***	*-0.005***	0.910	0.916	0.922	-0.006	-0.006	*-0.012***	0.007
Q15: Patient always received an answer to his/her medical question that same day when phoning provider's office during regular office hours	0.854	0.858	0.857	0.002	-0.005	-0.003	0.863	0.864	0.866	-0.003	-0.001	-0.004	0.001

Table B.9. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015
	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	
Q17: Patient always received an answer to his/her medical question as soon as needed when phoning provider's office after regular office hours	0.811	0.814	0.817	-0.003	-0.004	-0.007	0.827	0.818	0.812	0.006	0.009	0.015	-0.022
Q23: Patient with an appointment always saw provider within 15 minutes of appointment time	0.744	0.739	0.732	**0.008*** **	**0.005***	**0.013*** **	0.742	0.735	0.731	0.004	0.007	0.011	0.002
Q8: When patient phoned providers office for care needed right away, patient usually got an appointment on same day	0.817	0.811	0.820	*-0.009***	**0.005***	-0.003	0.811	0.805	0.828	*-0.023****	0.006	*-0.017***	**0.014***
Q11: Provider's office provided patient with information about what to do if care was needed during evenings, weekends, or holidays	0.793	0.788	0.778	**0.010****	0.005	**0.015*** **	0.784	0.795	0.795	0.000	-0.011	-0.011	**0.027****
Q13: If patient needed care during evenings, weekends, or holidays in the last 12 months, patient was always able to get needed care from provider's office	0.604	0.628	0.616	0.012	*-0.023****	-0.011	0.588	0.607	0.640	*-0.033**	-0.020	*-0.053****	**0.042***
Provider communication													
Q24: Providers always explained things to patient in a way that was easy to understand	0.945	0.945	0.944	0.001	0.000	0.001	0.948	0.946	0.946	0.001	0.002	0.002	-0.001
Q25: Provider always listened carefully to patient	0.946	0.946	0.948	-0.001	-0.001	-0.002	0.951	0.948	0.949	-0.001	0.002	0.001	-0.003
Q27: When patient talked with provider about health questions and concerns, provider always gave the patient easy-to-understand information	0.934	0.932	0.938	*-0.006****	0.002	*-0.004***	0.937	0.936	0.941	*-0.005**	0.001	-0.004	0.000

Table B.9. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015
	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	
Q28: Provider always seemed to know important information about patient's medical history	0.922	0.922	0.919	0.002	0.000	0.003	0.926	0.923	0.925	-0.002	0.003	0.002	0.001
Q29: Provider always showed respect for what patient had to say	0.958	0.959	0.959	0.000	-0.001	-0.001	0.964	0.962	0.961	0.001	0.002	0.004	-0.004
Q30: Provider always spent enough time with patient	0.930	0.930	0.926	**0.004*** **	-0.001	**0.004** **	0.932	0.932	0.928	0.004	0.000	0.004	0.000
Q38: Patient always felt that provider really cared about patient as a person	0.928	0.927	0.926	0.001	0.001	0.002	0.932	0.930	0.930	0.000	0.002	0.001	0.000
Q19: When patient emailed provider's office, s/he always received an answer to his/her medical question as soon as needed	0.889	0.886	0.871	0.015	0.003	**0.018***	0.905	0.871	0.873	-0.001	0.033	0.032	-0.014
Q21: If provider's office used a web portal or website, patient used it often (more than 3 times) to email the practice, review medical information, request prescription renewal, or make appointments	0.483	0.470	n.a.	n.a.	**0.013** **	n.a.	0.501	0.480	n.a.	n.a.	0.021	n.a.	n.a.
Q22: In the last 12 months, between visits, patient received reminders about tests, treatment, or appointments from provider's office	0.711	0.702	0.688	**0.014** **	0.009	**0.022*** **	0.701	0.693	0.701	-0.008	0.008	0.000	0.022
Q32: If provider ordered a blood test, x-ray, or other test, provider's office always followed up to provide patient with test results	0.908	0.908	0.910	-0.002	0.000	-0.002	0.902	0.908	0.915	-0.007	-0.006	*-0.013**	**0.011***
Q46: Practice staff asked patient during the last 12 months whether there was a period of time when they felt sad, empty, or depressed	0.456	0.437	0.388	**0.049*** **	**0.019*** **	**0.068*** **	0.445	0.420	0.401	0.019	**0.025***	**0.044*** **	0.024

Table B.9. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015
	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	
Q47: Provider spoke with patient during the last 12 months about things in life that are worrisome or cause stress for the patient	0.437	0.442	0.412	**0.030*** **	-0.005	**0.026*** **	0.436	0.430	0.427	0.004	0.005	0.009	0.016
Q48: Practice staff spoke with patient during the last 12 months about a personal, family, mental, emotional, or substance abuse problem	0.285	0.297	0.292	0.004	*-0.012***	*-0.008**	0.294	0.288	0.299	-0.011	0.006	-0.005	-0.002
Q49: Clerks and receptionists at provider's office were always as helpful as patient thought they should be	0.905	0.903	0.900	0.003	0.003	**0.005*** **	0.909	0.906	0.905	0.000	0.003	0.003	0.002
Q50: Clerks and receptionists at provider's office always treated patient with courtesy and respect	0.953	0.952	0.947	**0.005*** **	0.000	**0.005*** **	0.955	0.953	0.954	0.000	0.002	0.002	0.003
Providers' knowledge of care patient received from other providers													
Q40: If patient visited a specialist, provider always seemed informed and up-to-date about the care patient received from specialists	0.858	0.849	0.855	*-0.006***	**0.009*** **	0.003	0.860	0.857	0.861	-0.004	0.004	0.000	0.003
Q45: If patient takes prescription medicines, practice staff spoke with patient at each visit during the last 12 months about all prescription medications the patient was taking	0.877	0.877	0.866	**0.011*** **	0.000	**0.011*** **	0.870	0.866	0.865	0.002	0.004	0.006	0.005
Q53: If patient required a referral from provider to see a specialist, patient always easily got referral to a specialist the patient needed to see	0.906	0.913	0.917	-0.004	*-0.007**	*-0.012****	0.896	0.909	0.926	*-0.017****	*-0.013**	*-0.030****	**0.019*** **
Q55: If patient made an appointment to see a specialist, patient always easily got appointments with specialist	0.860	0.863	0.868	*-0.004**	-0.003	*-0.007****	0.867	0.865	0.870	-0.005	0.002	-0.003	-0.005

Table B.9. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015
	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	
Q56: If patient made an appointment to see a specialist, provider talked with patient during the last 12 months about the cost of seeing a specialist	0.078	0.094	0.081	**0.013*** **	*-0.015*** **	-0.003	0.077	0.102	0.085	**0.017** **	*-0.024*** **	-0.007	0.005
Q57: If patient made an appointment to see a specialist, patient was worried or concerned during the last 12 months about the cost of seeing a specialist	0.188	0.202	0.215	*-0.013** **	*-0.014*** **	*-0.027*** **	0.192	0.215	0.220	-0.005	*-0.023** **	*-0.028*** **	0.001
Q59: When patient saw specialist, specialist always knew important information about patient's medical history	0.860	0.859	0.861	-0.002	0.001	-0.001	0.865	0.864	0.868	-0.004	0.001	-0.002	0.001
(2013 only) Q57: If patient stayed in a hospital overnight or longer in the last 12 months, patient saw doctor, nurse practitioner, or physician assistant in provider's office within two weeks after most recent hospital stay	0.698	n.a.	n.a.	n.a.	n.a.	n.a.	0.654	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
(2013 only) Q58: When patient saw provider within two weeks of most recent hospital stay, provider seemed informed and up-to-date about patient's hospital stay	0.946	n.a.	n.a.	n.a.	n.a.	n.a.	0.958	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Q61: If patient stayed in a hospital overnight or longer in the last 12 months, patient was contacted by provider's office within three days of most recent hospital stay	0.587	0.565	n.a.	n.a.	**0.023***	n.a.	0.539	0.533	n.a.	n.a.	0.006	n.a.	n.a.

Table B.9. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015
	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	
Q63: If patient visited the emergency room or emergency department for care in the last 12 months, patient was contacted by provider's office within one week of most recent visit	0.570	0.543	n.a.	n.a.	**0.026****	n.a.	0.505	0.494	n.a.	n.a.	0.011	n.a.	n.a.
Providers support patients in taking care of their own health													
Q42: Someone in provider's office discussed with patient during the last 12 months specific goals for his/her health	0.658	0.600	0.590	**0.010***	**0.057*****	**0.067*****	0.658	0.580	0.613	*-0.033****	**0.078*****	**0.045*****	**0.022***
Q43: Someone in provider's office asked the patient during the last 12 months whether there are things that make it hard for patient to take care of his/her health	0.369	0.353	0.326	**0.028*****	**0.015*****	**0.043*****	0.382	0.341	0.348	-0.007	**0.041*****	**0.035*****	0.008
Q41: If patient received conflicting or confusing advice from other providers, provider helped patient manage the information	0.728	n.a.	n.a.	n.a.	n.a.	n.a.	0.748	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Providers discuss medication decisions with patients													
Q34: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might want to take the medicine	0.885	0.888	0.883	**0.005****	-0.003	0.002	0.897	0.889	0.891	-0.002	**0.008***	0.007	-0.004
Q35: If patient talked about starting/stopping a prescription medicine, provider talked a lot about the reasons patient might not want to take a medicine	0.784	0.788	0.791	-0.003	-0.004	*-0.007**	0.793	0.786	0.798	*-0.012**	0.007	-0.005	-0.002
Q36: If patient talked about starting/stopping a prescription medicine, provider asked what patient thought was best	0.781	0.785	0.761	**0.023*****	-0.004	**0.020*****	0.799	0.778	0.789	-0.011	**0.022***	0.011	0.009

Table B.9. (*continued*)

Question	Patients in CPC practices (CPC-wide)						Patients in comparison practices (CPC-wide)						DD estimate, 2013 to 2015
	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	2015	2014	2013	2013 to 2014	2014 to 2015	2013 to 2015	
Q68: If patient received care from provider for a chronic condition, s/he was always asked for her/his ideas or goals when making a treatment plan	0.722	0.722	n.a.	n.a.	0.000	n.a.	0.737	0.721	n.a.	n.a.	0.016	n.a.	n.a.
Q69: When patient received care from provider for a chronic condition, patient was always given a copy of her/his treatment plan	0.729	0.723	n.a.	n.a.	0.006	n.a.	0.717	0.704	n.a.	n.a.	0.013	n.a.	n.a.
Patients' rating of providers and care													
Q37: Patient rating of provider as best provider possible (9–10, out of a maximum of 10)	0.910	0.908	0.906	0.002	0.002	**0.004****	0.913	0.910	0.912	-0.002	0.003	0.001	0.003
Q51: Compared with one year ago, patient feels that the care received by the provider was much better	0.685	0.688	n.a.	n.a.	-0.003	n.a.	0.689	0.684	n.a.	n.a.	0.005	n.a.	n.a.

Sources: CPC patient surveys administered June through October 2013, July through October 2014, and July through October 2015.

Notes: Questions in table rows that we outlined with a black box are used for the composite measures.

Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate predicted probabilities for the composite measures, we first created patient-level composite measures by averaging binary indicators for whether the patient's response was the best option across each question in the composite. We then ran ordinary least squares (OLS) regressions on patient-level composite measures to create CPC-wide and region-level composite measures. **Green shading with bolded text** indicates a favorable and statistically significant at the 0.10-level finding, and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; pp = percentage points; n.a. = not applicable; HCC = hierarchical condition category.

Table B.10. Difference-in-differences estimates for the change in regression-adjusted mean responses from 2013 to 2015 for CPC practices versus comparison practices, sample of attributed Medicare FFS beneficiaries CPC-wide and by region

Composite measures	Difference-in-differences estimate (standardized means, 0–1)							
	CPC-wide	Arkansas	Colorado	New Jersey	New York	Ohio/Kentucky	Oklahoma	Oregon
Timely appointments, care, and information (five questions)	0.006	0.018	-0.005	0.005	**0.020****	-0.001	-0.004	0.006
Provider communication (six questions)	0.000	**0.015****	-0.009	-0.001	-0.005	-0.003	-0.003	0.002
Providers' knowledge of care the patient received from other providers (two questions)	0.004	**0.039***	*-0.047****	0.019	-0.011	0.006	0.028	-0.010
Providers support patients in taking care of their own health (two questions)	0.015	0.018	-0.016	0.033	0.040	0.001	0.011	0.020
Providers discuss medication decisions with patients (three questions)	0.002	0.026	-0.016	0.036	-0.015	0.014	-0.003	-0.020
Patients' rating of the provider (one question)	0.003	**0.027****	-0.005	-0.002	-0.010	-0.004	-0.003	0.011

Source: CPC patient surveys administered June through October 2013 and July through October 2015.

Notes: Composite measures for the six domains of care were created using 19 survey questions following the scoring instructions from the Consumer Assessment of Healthcare Providers and Systems (CAHPS) Clinician and Group survey. To calculate the six composite measures, we first calculated patient-level composite measures by averaging the nonmissing standardized responses across each question in a given domain. We then ran ordinary least squares (OLS) regressions on patient-level composite measures, controlling for baseline patient and practice characteristics and education status to obtain the composite measures for the CPC and comparison samples. Cells shaded **green with bolded text** indicate a favorable and statistically significant at the 0.10-level finding (the CPC practices improved more than the comparison practices), and ***red shading with white italicized text*** indicates an unfavorable and statistically significant at the 0.10-level finding.

All regression models controlled for baseline practice characteristics (practice size, medical home recognition, whether the practice had one or more meaningful EHR users, whether the practice is multi-specialty, and whether the practice was independent or owned by a medical group or health system), and baseline characteristics of the practices' county or census tract (whether in a medically underserved area, Medicare Advantage penetration rate, percentage urban, and median household income); and baseline (2012) patient characteristics (age, gender, race, reason for Medicare eligibility, dual eligibility status, HCC score, number of annualized physician visits, number of annualized emergency room visits, number of annualized inpatient hospitalizations), and education status at the time of the survey. We weighted estimates using patient-level nonresponse and practice-level matching weights and clustered standard errors at the practice level.

*/**/*** Statistically significant at the 0.10/0.05/0.01 level.

FFS = fee for service; HCC = hierarchical condition category.

APPENDIX C:

IMPACTS OF CPC ON MEDICARE EXPENDITURES, SERVICE USE, AND QUALITY OF CARE, BY REGION

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This appendix reports region-specific effects on Medicare expenditures, service use, and quality of care. Our statistical tests led to rejection of the hypothesis that the impacts of CPC on expenditures were equal across regions in Year 1 (October 2012 to September 2013), although the same hypothesis could not be rejected for Years 2 and 3 (October 2013 to September 2014, and October 2014 to September 2015, respectively). In this appendix, for Medicare expenditures, service utilization, and claims-based quality-of-care outcome measures, we draw our inferences about impacts based on whether cumulative estimates over the three-year period were statistically significant. For claims-based quality-of-care *process* measures, we focus on the statistical significance and direction of impact estimates on the two composite measures for diabetes and the number as well as pattern of statistically significant yearly estimates across all the quality-of-care process measures in a region to conclude whether estimates are likely to represent a true impact. However, Tables C.1 through C.14 report all results regardless of whether they are statistically significant.

A. Arkansas

There were no favorable impacts on total Medicare expenditures in Arkansas and few statistically significant impacts on Medicare service use and claims-based quality-of-care outcomes. The results suggest declines in primary care clinician visits (and in resulting expenditures for such services) and in the likelihood of ED revisit. However, these effects are offset by statistically significant but small increases in expenditures for hospice and home health services.

Medicare expenditures. As we note in Chapter 7, the cumulative expenditures estimates for Arkansas were quite different from the overall CPC-wide results, with no decline in Medicare expenditures without fees across the three years for CPC patients relative to comparison patients and an $18 (2 percent) increase in net Medicare expenditures including fees that was not significant (Table 7.8). Examining cumulative impact estimates for Medicare expenditures by service category, statistically significant findings for the CPC group relative to the comparison group were as follows (Table C.1):

- Among all patients, average monthly Medicare expenditures on primary care clinician services declined by $2 per beneficiary per month (PBPM), or 5 percent, across the three years, and expenditures also declined for durable medical equipment (DME) services in Year 3 by $3 (9 percent).
- However, average monthly Medicare expenditures on home health services increased by $4 PBPM, or 12 percent, across the three years, and expenditures on hospice services increased by $4 (23 percent) among all patients.
- These effects were concentrated more heavily (but not solely) among high-risk patients, for whom average monthly expenditures on primary care clinician services decreased by $5 or, 7 percent, and expenditures on home health and hospice services increased by $11 and $10 PBPM, or 14 and 24 percent, respectively, across the three years.

Medicare service use. For service utilization measures, cumulative estimates suggest no statistically significant declines in any of the key service utilization measures for hospitalizations or ED visits. The only statistically significant cumulative findings were for primary care clinician visits, consistent with the decline in primary care expenditures described above.

- CPC reduced primary care clinician visits in all settings per 1,000 patients across the three years by 500 visits (6 percent) for all patients. The effects were once again concentrated among high-risk patients with a decline of 997, or 8 percent, across the three years.
- CPC also reduced office-based primary care clinician visits per 1,000 patients by 189 (4 percent) for all patients, and by 335 (6 percent) among high-risk patients, across the three years.

Although the cumulative estimates were not statistically significant, CPC appears to have increased observation stays per 1,000 patients significantly in Year 3 among all patients by 11 (16 percent). High-risk patients experienced especially large increases of 28 and 33 stays (26 to 29 percent) in Years 2 and 3, respectively, with the cumulative estimate of an increase of 23 (20 percent) being close to statistically significant at the 10 percent level.

Quality of care. Among all patients as well as high-risk patients, there were few statistically significant impacts on the claims-based quality-of-care process and outcome measures in Arkansas that were favorable, and no significant effects on continuity of care measures (Table C.2). Although there were improvements in one of the composite quality of care measures for beneficiaries with diabetes, it was statistically significant in only one year, and there were no significant improvements in any of the individual quality-of-care process measures for diabetes or ischemic vascular disease. Therefore, it is unlikely that CPC improved quality-of-care process measures in Arkansas. However, cumulative estimates for quality-of-care outcome measures suggest a decline among all patients in the likelihood of ED revisit.

- Among all patients and high-risk patients, the likelihood of receiving all four tests for diabetes increased by 3.4 and 4.7 percentage points (14 and 20 percent), respectively, in Year 1. However, smaller estimated increases in Year 2 and unfavorable estimates in Year 3 were not statistically significant.
- The likelihood of revisiting an ED within 30 days of an outpatient ED visit decreased by 0.3 percentage points, or 5 percent, across the three years for all patients. The cumulative estimate was larger but not statistically significant for high-risk patients.

B. Colorado

Based on cumulative estimates, there were no statistically significant effects on total Medicare expenditures or service utilization in Colorado. Although there were reductions in expenditures for a few services, they do not point toward a clear pattern for reductions in expenditures or service use. For claims-based quality-of-care measures, there were mixed findings with very few statistically significant estimates.

Medicare expenditures. As we indicate in Chapter 7, cumulative expenditures estimates across the two years show no statistically significant effects on Medicare expenditures either with or without care management fees among all or high-risk patients in Colorado (Table 7.8). The only statistically significant effects on Medicare expenditures for specific service categories across the three years were as follows (Table C.3):

- Among all patients, CPC reduced outpatient expenditures by $8 PBPM, or 6 percent, across the three years, with yearly estimates suggesting an increase in the magnitude of estimated effects over time—the $11 PBPM, or 8 percent, decline in Year 3 being statistically significant and larger than the estimated reductions of $5 and $8 in the first two years. However, no such effect was observed among the high-risk subgroup, nor for the number of outpatient ED visits for all patients.
- Among high-risk patients, CPC reduced DME expenditures by $6 (10 percent) across the three years, with yearly effects growing over time.

Medicare service use. Among all patients as well as high-risk patients in Colorado, there were no significant cumulative impacts on key service utilization measures (Table C.3).

Quality of care. There were a few small but statistically significant findings among the 11 quality-of-care process and outcome measures examined, without any clear evidence for improvement (Table C.4). An improvement in eye exam for diabetes was accompanied by a decline in lipid testing for ischemic vascular disease. Similarly, findings for quality-of-care outcome measures were mixed—although there was a decline in 30-day unplanned readmissions among all patients, there was an increase among high-risk patients in the likelihood of revisiting an ED.

Relative to the comparison group, the CPC group saw the following changes:

- The rate of eye exams for diabetes was significantly greater for CPC patients in only one of the three years, with an estimated increase of 2.9 percentage points (6 percent) among all patients and 6.5 percentage points among high-risk patients in Year 2. In general, estimated effects were more than twice as large for high-risk patients.
- Lipid testing for ischemic vascular disease among all patients decreased by 3.3 percentage points (4 percent) in Year 3, but the estimated 5 percentage point decline in Year 3 for high risk patients was not statistically significant.
- The likelihood of an unplanned 30-day readmission declined by 1 percentage point (8 percent) among all patients across the three years.

- Despite these favorable effects, the likelihood of an ED revisit within 30 days of an outpatient ED visit was worse for the high-risk subset of CPC patients, by around 2 percentage points (30 percent of the mean), across the three years.

C. New Jersey

There were no statistically significant effects on Medicare expenditures or key service use outcomes across the three years in New Jersey, although there was a significant decline in specialist visits. As in the CPC-wide results, statistically significant reductions in Medicare expenditures without fees during the first two years in New Jersey were no longer significant in Year 3. There were unfavorable effects on some of the quality-of-care process measures for diabetes in New Jersey—mainly driven by improvements in the comparison group over time.

Medicare expenditures. Although cumulative expenditures estimates for the first three years suggest declines of $19 and $36 in Medicare expenditures PBPM without fees for all patients and for high-risk patients, respectively, or 2 percent, these estimates were not statistically significant (Table 7.6 and Table C.5). Also, none of the cumulative estimates for Medicare expenditures, by service category, were statistically significant for all patients. The large declines in inpatient expenditures by $26 and $22 in Years 1 and 2 that accounted for nearly 60 percent and 67 percent of the decline in Medicare expenditures without fees in Year 1 and Year 2, respectively, among all patients, turned into a statistically insignificant increase of $13 in Year 3. Among high-risk patients, DME expenditures increased by $6 PBPM, or 17 percent, across the three years.

Medicare service use. In New Jersey, the only statistically significant impact estimates for Medicare service use outcomes during the first three years combined were as follows (Table C.5):

- Annual specialist visits in all settings declined by 483 per 1,000 patients (3 percent) and by 798, or 3 percent, among all and high-risk patients respectively, across the three years. However, yearly estimates suggest that these effects may be weakening over time.
- Annual office-based primary care clinician visits declined by 221, or 5 percent, across the three years among all patients.

Quality of care. There were a few statistically significant unfavorable effects on the quality-of-care process measures for diabetes in New Jersey, especially in Year 3, mainly driven by improvements in the comparison group over time, with the CPC group means starting higher than comparison at baseline and remaining stable over time. Although there were declines in both composite measures for diabetes among all patients, they were statistically significant in Year 3 only. There were no statistically significant effects on any of the quality-of-care outcome measures (Table C.6).

- The likelihood of receiving all four tests for diabetes declined by 6.5 percentage points, or 15 percent, among all patients in Year 3, but a smaller decline of 2.4 percentage points was not significant for high-risk patients. The unfavorable impact for all patients was driven by a larger decrease in the CPC group than in the comparison group from Year 2 to Year 3.

- The likelihood of receiving none of the four tests increased by 1 percentage point in Year 3 among all patients with diabetes, driven by a faster decline or improvement in the comparison group from Year 2 to Year 3, although both the CPC and comparison groups improved during this time.

Among individual measures for beneficiaries with diabetes, there were a few sporadic effects, with statistically significant declines in HbA1c testing, eye exam, and urine protein testing in one or two years.

D. New York: Capital District–Hudson Valley region

In New York, we could not reject the hypothesis that effects on Medicare expenditures (without fees) were zero for the three years combined; however, estimated effects were favorable and increasing over time, and were larger for the high-risk group, as expected. Furthermore, estimated effects on expenditures for inpatient care, and on number of inpatient admissions, were sizable and statistically significant across the three years. These findings suggest that CPC has reduced expenditures before fees (but not after fees) in New York, for both high-risk patients and overall. In addition, there were a number of improvements in claims-based measures of quality of care.

Medicare expenditures. The estimated effects on cumulative Medicare expenditures were not statistically significant, either with or without care management fees, among all attributed patients or high-risk patients in New York. However, separate year-specific estimates suggest significant declines in Medicare expenditures without fees in Year 3 of $36 and $71 PBPM (4 percent) among all and high-risk patients, respectively. Estimated effects on expenditures including fees were not significant (Table C.7).

In results for expenditures by service category, cumulative estimates suggest statistically significant declines in inpatient expenditures of $24 (7 percent) and $52 PBPM (8 percent) among all and high-risk patients, respectively, across the three years. This difference fully accounts for the estimated effect on Medicare expenditures overall. Also, home health expenditures declined by $4 (10 percent) and $7 (8 percent) among all and high-risk patients respectively, across the three years, but expenditures on specialists increased among all patients by $7 PBPM, or 5 percent; the number of specialist visits also increased by a small amount among all patients but was not statistically significant. Among high-risk patients, a smaller increase in expenditures on specialists was not statistically significant, with the number of specialist visits actually showing a statistically significant 3 percent decline. (Because the costs for specialist services vary widely by the type of specialist, impacts on specialist costs and specialist visits do not necessarily mirror each other.)

Medicare service use. As we describe in Chapter 7, among all and high-risk patients in New York, cumulative impact estimates suggest significant declines in hospitalizations of 20 and 40 per 1,000 patients (6 percent), respectively, across the three years, but no significant effect on outpatient ED visits (Table 7.8 and Table C.7). Other statistically significant impacts for the CPC group relative to the comparison group were as follows:

- Primary care clinician visits in all settings declined by 359 and 648 per 1,000 patients (4 and 5 percent) among all and high-risk patients, respectively.

- Specialist visits in all settings declined by 796 per 1,000 patients (3 percent) among high-risk patients only across the three years.

Quality of care. Among all patients in New York, there were several small but statistically significant improvements for the CPC group relative to the comparison group in the quality-of-care process measures among patients with diabetes and ischemic vascular disease (IVD), with effects concentrated in Years 1 and 3, as shown in Table C.8. Given the statistically significant impacts on at least one of the composite measures for beneficiaries with diabetes, among all patients as well as high-risk patients, and the consistency in and number of statistically significant impacts for individual process measures, it is likely that CPC actually improved quality-of-care processes in New York. That is, these findings are unlikely to be driven by chance alone. However, there were no significant impacts on quality-of-care outcome measures or on continuity of care.

- HbA1c testing for patients with diabetes increased by 4.5 percentage points (6 percent) in Year 1 and by 3.2 percentage points (4 percent) in Year 3, with a much smaller improvement of 0.3 percentage points not significant in Year 2.
- Lipid testing among patients with diabetes increased by 2.6 percentage points (3 percent) in Year 1.
- The likelihood of not complying with all four diabetes tests or exams declined by 1.4 percentage point (29 percent) in Year 1 and by 0.8 percentage points (25 percent) in Year 3, with a smaller, insignificant decrease of 0.2 percentage points in Year 2.
- Lipid testing among patients with IVD increased by 2 percentage points (2 percent) in Year 1.
- Although the cumulative estimate was not statistically significant, ACSC admissions declined by 5 per 1,000 patients (7 percent) in Year 3.

Similarly, among high-risk patients in New York, there were also several statistically significant improvements in quality-of-care measures for the CPC group relative to the comparison group, with most of those effects occurring in Years 1 and 2:

- HbA1c testing among patients with diabetes increased by 6.4 percentage points (8 percent) in Year 1.
- Eye exams among patients with diabetes increased by 4.1 percentage points (7 percent) in Year 2.
- Urine protein testing among patients with diabetes increased by 6.3 percentage points (11 percent) in Year 1.
- All four tests for patients with diabetes increased by 5.6–6 percentage points (17 and 18 percent, respectively) in both Years 1 and 2, with a smaller increase of 2.8 percentage points not significant in Year 3.
- Lipid testing among patients with IVD increased by 2.7 and 4.6 percentage points (3 and 6 percent) in Years 1 and 2, respectively, with a smaller increase of 2 percentage points not significant in Year 3.

E. Ohio/Kentucky: Cincinnati-Dayton region

The pattern of results in Ohio/Kentucky differed from that of all regions combined, with *increases* in Medicare expenditures and service use for the CPC group relative to the comparison group.

Medicare expenditures. As we show in Chapter 7, cumulative expenditures estimates for the first three years show an increase of $34 in Medicare expenditures without fees for all patients, which was not statistically significant. However, the increase of $94 (6 percent) for high-risk patients in Medicare expenditures without fees across the three years was significant (Table 7.8 and Table C.9). After including fees, these increases were $51 (6 percent) and $121 (8 percent) for all and high-risk patients, respectively, both significant. For both all and high-risk patients, statistically significant increases in Medicare expenditures began in Year 1 itself, when the intervention was least likely to have an effect. As such, the cost increases in Ohio need to be interpreted with caution and skepticism as to whether they can be attributed to CPC.

Cumulative estimates for Medicare expenditures by service category show the following statistically significant results in Ohio/Kentucky:

- Inpatient expenditures increased by $23 and $57 PBPM (7 and 10 percent) among all and high-risk patients, respectively, across the three years, accounting for 60–70 percent of the increase in total Medicare expenditures without fees.
- Expenditures on physician services increased by $11 and $26 PBPM (5 and 8 percent) among all and high-risk patients, respectively, across the three years. This increase was driven by increases in expenditures on specialist services by $10 and $21 PBPM (9 and 13 percent) among all and high-risk patients, respectively.
- There was a statistically significant increase in home health expenditures of $5 (11 percent) among all patients only across the three years.

Medicare service use. Although cumulative estimates through Year 3 suggested increases in hospitalizations and decrease in outpatient ED visits, neither of these estimates was statistically significant. However, the pattern of findings for both outpatient ED visits and all ED visits suggested larger effects in Year 3 for all and high-risk patients, with the Year 3 estimates being statistically significant for outpatient ED visits (Table C.9):

- For all and high-risk patients, outpatient ED visits per 1,000 beneficiaries declined by 29 and 47 (5 percent) in Year 3.
- Consistent with the increase in expenditures on specialist services, annual specialist visits in all settings increased by 601 and 1,306 per 1,000 beneficiaries for all and high-risk patients, or by 4 and 6 percent, respectively, across the three years.

Quality of care. There were very few statistically significant effects on the quality-of-care measures among either all or high-risk patients in Ohio/Kentucky during the first three years of the initiative relative to the comparison group (Table C.10). There were no effects on quality-of-care process measures for diabetes or IVD; there were unfavorable effects on continuity of care among both all and high-risk patients, and some unfavorable effects on a single quality-of-care

outcome measure among high-risk patients. Overall, it appears that there were no improvements in quality of care on these measures in Ohio, and some deterioration in continuity of care.

- The Bice-Boxerman Index of continuity of care, based on primary care physician visits, decreased by 3.7 percentage points (5 percent) among all CPC patients and by 3.4 percentage points (5 percent) among high-risk patients in the post-intervention period, implying a decline in the continuity of care received. Also, the Bice-Boxerman Index of continuity of care, based on all physician visits, decreased by 1.3 percentage points (4 percent) among all patients in the post-intervention period.
- ACSC admissions increased by 17 per 1,000 patients (8 percent) among all high-risk patients across the three years.

F. Oklahoma: Greater Tulsa region

There was a statistically significant decline in Medicare expenditures without fees for all patients in Oklahoma, but it was driven by an especially large effect in Year 1 only. Also, ED visits declined across the three years, as did the likelihood of an ED revisit among both all and high-risk patients.

Medicare expenditures. As we show in Chapter 7, cumulative estimates for the first three years show a significant decline in Medicare expenditures without fees of $22 (3 percent) for all patients, but the $7 decline with fees was not significant (Table 7.8 and Table C.11). Also, the $53 cumulative decline for high-risk patients in Medicare expenditures without fees and of $29 with fees were not statistically significant. For both all and high-risk patients, these estimates were driven by large declines in Year 1 ($54 and $137, respectively) that diminished precipitously in magnitude in Years 2 and 3 (to $10 and $9, respectively, overall, and by even greater amounts for high risk patients)—creating a pattern that is the opposite of what one would expect due to the intervention. Thus, we view the Oklahoma results with skepticism that the effects are real.

Separate cumulative estimates for Medicare expenditures by service category show the following statistically significant results:

- Inpatient expenditures declined by $11 PBPM, or 4 percent, among all patients across the three years, once again driven by an especially large reduction in Year 1.
- Skilled nursing facility expenditures declined by $5 PBPM (9 percent) and $14 (11 percent) among all and high-risk patients, respectively.

Medicare service use. As we show in Chapter 7, among all and high-risk patients, cumulative impact estimates for the two key utilization outcomes (hospitalizations and outpatient ED visits) suggest a statistically significant decline in only outpatient ED visits by 22 and 69 per 1,000 patients, or 4 and 7 percent, respectively (Table 7.8 and Table C.11). Cumulative estimates also show the following significant impacts on Medicare service use outcomes in Oklahoma:

- Annualized total ED visits declined by 24 and 70 per 1,000 patients, or by 3 and 5 percent, among all and high-risk patients, respectively.

- Although cumulative estimates were not statistically significant, both primary care and specialist visits across all settings increased in Year 3 among all and high-risk patients. These increases were 6 and 2 percent among all patients in primary care and specialist visits, respectively, and 8 and 7 percent among high-risk patients. However, office-based primary care visits declined among both all and high-risk patients by 5 and 7 percent, respectively, in Year 3.

Quality of care. Among all patients in Oklahoma, there were a few significant effects on continuity of care and the quality-of-care process measures, and these were mostly unfavorable. (Table C.12). However, given the few sporadic, statistically significant estimates for quality-of-care process measures, it is unlikely that CPC affected these process measures for diabetes or IVD in any meaningful way. On the other hand, the favorable effect on a quality-of-care outcome in the form of declines in the likelihood of ED revisit is plausible, given the consistency with effects on ED visits. For CPC patients relative to comparison patients, the following differences were significant:

- Eye exam for diabetes decreased by 3.5 percentage points (6 percent) among all patients in Year 1.
- The likelihood of receiving all four tests for patients with diabetes declined by 5.8 percentage points (21 percent) among all patients in Year 1.
- The findings for continuity of care measures suggested a greater decline in care continuity for the CPC group relative to the comparison group. Specifically, the percentage of all physician visits at the attributed practice decreased by 2.3 percentage points (6 percent) in the post-intervention period. Also, the Bice-Boxerman Index of continuity of care, based on primary care physician visits and all physician visits, declined by 2.8 and 1.8 percentage points (4 and 5 percent), respectively, in the post-intervention period.

For quality-of-care outcome measures, there was a favorable effect on a single outcome, with the likelihood of revisiting an ED within 30 days of an outpatient ED visit declining by 0.6 percentage points (10 percent) across the three years.

Similarly, among high-risk patients in Oklahoma, there were relatively few significant effects on quality of care, with a few unfavorable effects on claims-based quality process measures related to diabetes and for continuity of care, and one favorable effect on claims-based quality outcomes, namely on ED revisit, for CPC patients relative to comparison patients (Table C.12):

- Lipid testing for diabetes declined by 3.5 percentage points (5 percent) in Year 2.
- The likelihood of receiving all four tests for patients with diabetes declined by 5 percentage points (19 percent) in Year 1.
- The Bice-Boxerman Index of continuity of care, based on all physician visits, declined by 1.4 percentage points (4 percent) in the post-intervention period.
- The likelihood of an ED revisit within 30 days of an outpatient ED visit declined by around 1 percentage point (10 percent) across the three years.

G. Oregon

In Oregon, although reductions in Medicare expenditures were not statistically significant, there were favorable effects on outpatient and total ED visits among all attributed patients. In addition, there were a number of improvements in claims-based measures of quality of care.

Medicare expenditures. Based on the cumulative estimates, there were no statistically significant effects on annual Medicare expenditures, either with or without care management fees, among all attributed patients or high-risk patients in Oregon (Table 7.8 and Table C.13). However, separate cumulative estimates by expenditure category show statistically significant reductions in inpatient and outpatient expenditures among all patients by $11 and $7 PBPM (4 and 5 percent) across the three years, offset in part by an increase in hospice expenditures by $5, or 19 percent. (Table C.13). However, none of the cumulative estimates by expenditure category was statistically significant for high-risk beneficiaries.

Medicare service use. Among all patients, cumulative impact estimates suggest that CPC reduced outpatient ED visits by 25 per 1,000 patients, or 5 percent (Table 7.8 and Table C.13), but not hospitalizations, despite the statistically significant estimated reduction in cumulative inpatient expenditures. Similarly, total ED visits declined by 30 per 1,000 beneficiaries, or 4 percent, among all patients across the three years. However, there were no statistically significant effects on any service use measure among high-risk patients.

Quality of care. Among all patients in Oregon, there were several statistically significant improvements for the CPC group relative to the comparison group in the quality-of-care process measures for diabetes, with the effects concentrated in the first year of CPC (Table C.14). Given statistically significant improvements in one of the composite measures for beneficiaries with diabetes, also consistent improvements in another composite measure (not significant), and the consistency in and number of statistically significant impacts for individual process measures, it is likely that CPC actually improved quality-of-care processes in Oregon. Also, CPC appears to have improved some quality-of-care outcomes, with the reduction in ED revisit, in particular, being consistent with the favorable effects on ED visits. However, it is unlikely that CPC affected continuity of care, because there was only one statistically significant impact among high-risk beneficiaries, and the direction of effects were otherwise mixed, with statistically insignificant declines in some measures and insignificant increases in others for both all and high-risk patients.

- HbA1c testing for patients with diabetes increased by 3.2 percentage points (4 percent) in Year 1.
- Lipid testing among patients with diabetes increased by 1.8 percentage points (2 percent) in Year 1.
- Urine protein testing among patients with diabetes increased by 4.1 and 6.5 percentage points (6 and 12 percent) in Years 2 and 3, respectively.
- The likelihood of not complying with all four diabetes tests or exams declined by 1.8 and 1.2 percentage points (29 and 25 percent) in Year 1 and 2, respectively.
- Among quality-of-care outcome measures, the likelihood of revisiting an ED within 30 days of an outpatient ED visit declined by 0.4 percentage points (7 percent) across the three years.

Similarly, among high-risk patients in Oregon, there were also several statistically significant improvements in quality-of-care measures for diabetes among the CPC group relative to the comparison group:

- Lipid testing among patients with diabetes increased by 5.5 percentage points (7 percent) in Year 2.
- Eye exams among patients with diabetes increased by 5.8 percentage points (11 percent) in Year 1.
- Urine protein testing among patients with diabetes increased by 5.4 and 8.9 percentage points (8 and 14 percent) in Years 2 and 3, respectively.
- The likelihood of not complying with all four diabetes tests or exams declined by 1.6 percentage points (28 percent) in Year 1.
- There was an unfavorable effect on continuity of care, with the Bice-Boxerman Index based on primary care physician visits declining by 2.8 percentage points (5 percent) in the post-intervention period.
- Among quality-of-care outcome measures, the likelihood of a 14-day follow-up visit increased by 3.4 percentage points (5 percent) across the three years.

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Table C.1. Regression-adjusted means and estimated difference-in-differences impact of CPC on expenditure and utilization measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Arkansas

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total Medicare expenditures ($ PBPM)												
Without CPC care management fees												
Baseline	$556	$580	-	-	-	-	$1,338	$1,352	-	-	-	-
Year 1	$684	$710	-$2	$14	0%	0.872	$1,361	$1,407	-$32	$47	-2%	0.488
Year 2	$738	$754	$8	$14	1%	0.552	$1,416	$1,412	$19	$40	1%	0.638
Year 3	$791	$813	$2	$17	0%	0.907	$1,458	$1,482	-$10	$51	-1%	0.85
Years 1, 2, and 3 combined	$772	$793	$3	$13	0%	0.844	$1,428	$1,450	-$7	$41	-1%	0.854
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 0.31	*p*-val = 0.82					F = 0.44	*p*-val = 0.72				
With CPC care management fees												
Baseline	$556	$580	-	-	-	-	$1,338	$1,352	-	-	-	-
Year 1	$703	$710	$17	$14	2%	0.239	$1,387	$1,407	-$6	$47	0%	0.899
Year 2	$755	$754	$25*	$14	3%	0.076	$1,442	$1,411	$44	$40	3%	0.273
Year 3	$804	$813	$14	$17	2%	0.395	$1,476	$1,482	$8	$51	1%	0.875
Years 1, 2, and 3 combined	$787	$793	$18	$13	2%	0.17	$1,451	$1,450	$16	$40	1%	0.697
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 1.51	*p*-val = 0.21					F = 0.71	*p*-val = 0.55				
Expenditures by type of service ($ PBPM)												
Inpatient												
Baseline	$203	$186	-	-	-	-	$539	$483	-	-	-	-
Year 1	$263	$247	$0	$10	0%	0.974	$554	$525	-$27	$31	-4%	0.395
Year 2	$278	$255	$7	$9	3%	0.417	$567	$505	$7	$22	1%	0.768
Year 3	$291	$273	$1	$8	0%	0.887	$573	$525	-$7	$29	-1%	0.803
Years 1, 2, and 3 combined	$290	$271	$3	$8	1%	0.726	$570	$524	-$9	$24	-2%	0.701
Skilled nursing facility												
Baseline	$18	$31	-	-	-	-	$81	$106	-	-	-	-
Year 1	$41	$59	-$5*	$3	-9%	0.061	$109	$146	-$11	$9	-9%	0.19
Year 2	$49	$63	-$1	$4	-2%	0.815	$120	$152	-$6	$9	-5%	0.467
Year 3	$57	$74	-$5	$5	-8%	0.275	$130	$172	-$17	$10	-12%	0.101
Years 1, 2, and 3 combined	$55	$72	-$4	$3	-6%	0.28	$125	$162	-$11	$7	-8%	0.113
Outpatient												
Baseline	$98	$100	-	-	-	-	$201	$204	-	-	-	-
Year 1	$107	$108	$1	$3	1%	0.695	$191	$186	$8	$9	4%	0.391
Year 2	$120	$121	$1	$4	1%	0.757	$205	$196	$12	$13	6%	0.367
Year 3	$131	$135	-$2	$4	-1%	0.646	$215	$216	$2	$10	1%	0.862
Years 1, 2, and 3 combined	$122	$125	$0	$3	0%	0.998	$204	$200	$7	$10	4%	0.46

Table C.1. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Physician (primary care, specialist, and other noninstitutional providers)												
Baseline	$185	$195	-	-	-	-	$347	$353	-	-	-	-
Year 1	$201	$213	-$1	$3	-1%	0.671	$327	$346	-$12	$8	-4%	0.14
Year 2	$211	$230	-$8	$5	-4%	0.116	$334	$355	-$14	$13	-4%	0.255
Year 3	$223	$234	$0	$4	0%	0.988	$337	$352	-$9	$13	-3%	0.493
Years 1, 2, and 3 combined	$216	$230	-$3	$3	-1%	0.29	$333	$351	-$12	$8	-3%	0.16
Primary care physician												
Baseline	$32	$34	-	-	-	-	$59	$62	-	-	-	-
Year 1	$40	$44	-$2**	$1	-5%	0.05	$60	$67	-$4**	$2	-6%	0.024
Year 2	$40	$45	-$3***	$1	-8%	0.006	$60	$68	-$4**	$2	-6%	0.044
Year 3	$43	$50	-$4**	$2	-9%	0.014	$65	$74	-$6**	$3	-9%	0.029
Years 1, 2, and 3 combined	$39	$44	-$2**	$1	-5%	0.027	$62	$70	-$5**	$2	-7%	0.013
Specialist												
Baseline	$85	$86	-	-	-	-	$164	$157	-	-	-	-
Year 1	$101	$101	$0	$3	-1%	0.889	$151	$150	-$6	$7	-4%	0.377
Year 2	$103	$103	$0	$3	0%	0.942	$153	$146	$0	$7	0%	0.989
Year 3	$104	$102	$2	$3	2%	0.452	$147	$141	$0	$5	0%	0.981
Years 1, 2, and 3 combined	$98	$96	$2	$2	2%	0.316	$150	$145	-$2	$5	-1%	0.675
Home health												
Baseline	$24	$39	-	-	-	-	$88	$122	-	-	-	-
Year 1	$29	$44	-$1	$1	-2%	0.614	$77	$109	$3	$3	4%	0.353
Year 2	$35	$43	$6***	$2	20%	<.001	$85	$106	$14***	$5	19%	0.005
Year 3	$39	$48	$6***	$2	17%	0.001	$91	$110	$16***	$5	21%	0.001
Years 1, 2, and 3 combined	$38	$49	$4***	$1	12%	0.002	$88	$112	$11***	$4	14%	0.003
Hospice												
Baseline	$0	$1	-	-	-	-	$9	$12	-	-	-	-
Year 1	$15	$13	$4*	$2	23%	0.092	$41	$36	$8	$5	20%	0.117
Year 2	$20	$17	$4	$3	21%	0.168	$48	$42	$9	$6	22%	0.159
Year 3	$24	$20	$5	$3	25%	0.101	$55	$45	$13	$8	30%	0.103
Years 1, 2, and 3 combined	$22	$19	$4*	$2	23%	0.096	$50	$43	$10*	$6	24%	0.083
DME												
Baseline	$29	$28	-	-	-	-	$74	$72	-	-	-	-
Year 1	$28	$26	$1	$1	2%	0.366	$61	$59	$0	$2	0%	0.887
Year 2	$26	$26	-$1	$1	-3%	0.448	$56	$55	-$2	$3	-3%	0.609
Year 3	$27	$29	-$3**	$1	-9%	0.03	$57	$62	-$7*	$4	-11%	0.058
Years 1, 2, and 3 combined	$28	$28	-$1	$1	-4%	0.202	$58	$59	-$3	$2	-5%	0.234

Table C.1. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Utilization (annualized rate per 1,000 beneficiaries)												
Hospitalizations												
Baseline	261	250	-	-	-	-	648	616	-	-	-	-
Year 1	311	296	4	6	1%	0.514	658	636	-10	18	-1%	0.589
Year 2	317	304	1	9	0%	0.891	655	623	0	23	0%	0.983
Year 3	328	329	-12	8	-4%	0.127	655	667	-43*	24	-6%	0.071
Years 1, 2, and 3 combined	333	325	-3	7	-1%	0.66	666	651	-17	19	-3%	0.356
Total ED visits												
Baseline	615	617	-	-	-	-	1,337	1,322	-	-	-	-
Year 1	686	695	-8	15	-1%	0.611	1,321	1,332	-26	44	-2%	0.556
Year 2	735	725	12	17	2%	0.47	1,377	1,355	6	42	0%	0.887
Year 3	800	804	-2	18	0%	0.901	1,473	1,481	-23	46	-2%	0.616
Years 1, 2, and 3 combined	767	768	1	14	0%	0.966	1,399	1,398	-14	39	-1%	0.721
Outpatient ED visits												
Baseline	474	468	-	-	-	-	944	907	-	-	-	-
Year 1	504	502	-4	13	-1%	0.738	897	877	-17	38	-2%	0.644
Year 2	538	522	9	15	2%	0.543	929	903	-11	35	-1%	0.751
Year 3	583	569	8	16	1%	0.645	1,004	965	1	43	0%	0.973
Years 1, 2, and 3 combined	555	545	4	13	1%	0.74	944	916	-9	35	-1%	0.798
Outpatient ED visits that led to observation stays												
Baseline	59	65	-	-	-	-	128	141	-	-	-	-
Year 1	63	67	2	5	2%	0.751	125	130	8	14	6%	0.593
Year 2	72	69	9	6	13%	0.122	136	121	28*	16	26%	0.074
Year 3	77	72	11**	5	16%	0.036	147	128	33**	16	29%	0.046
Years 1, 2, and 3 combined	74	72	7	5	11%	0.106	137	128	23	14	20%	0.107
Primary care visits												
Baseline	7,461	7,977	-	-	-	-	12,199	12,728	-	-	-	-
Year 1	8,018	8,709	-175	115	-2%	0.127	12,048	13,180	-603***	230	-5%	0.009
Year 2	8,046	9,051	-489***	172	-6%	0.005	11,916	13,253	-808***	311	-6%	0.009
Year 3	8,436	9,693	-742***	260	-8%	0.004	12,206	14,331	-1,595***	458	-12%	0.001
Years 1, 2, and 3 combined	8,383	9,413	-500***	153	-6%	0.001	12,131	13,662	-997***	288	-8%	0.001
Specialist visits												
Baseline	10,927	11,436	-	-	-	-	20,104	20,419	-	-	-	-
Year 1	11,611	12,032	88	155	1%	0.571	18,820	19,406	-271	416	-1%	0.515
Year 2	12,060	12,450	119	178	1%	0.503	18,834	19,240	-90	352	0%	0.797
Year 3	12,499	12,706	302	242	3%	0.212	18,618	19,186	-253	376	-1%	0.501
Years 1, 2, and 3 combined	12,415	12,758	180	162	2%	0.268	18,787	19,308	-205	275	-1%	0.457

Table C.1. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Office-based primary care visits												
Baseline	4,218	4,367	-	-	-	-	6,117	6,042	-	-	-	-
Year 1	4,276	4,426	-1	56	0%	0.987	5,717	5,681	-39	95	-1%	0.682
Year 2	4,192	4,605	-265**	118	-6%	0.026	5,451	5,809	-433**	181	-7%	0.017
Year 3	4,353	4,772	-270	188	-6%	0.151	5,539	6,011	-547*	314	-9%	0.081
Years 1, 2, and 3 combined	4,317	4,657	-189*	110	-4%	0.085	5,549	5,810	-335**	169	-6%	0.047
Total number of observations (treatment and comparison) across all years	968,838						256,719					

Source: Medicare claims data for the period October 2011 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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, 2, or 3 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. Expenditures on physician services includes expenditures on primary care physician services, specialist services, and services provided by other noninstitutional providers (the third category is not shown separately). For Medicare service use measures, observation stays are included in measures of outpatient ED visits and total ED visits. Primary care visits include office-based primary care visits as well as visits in other settings.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; DME= durable medical equipment; ED = emergency department; PBPM = per beneficiary per month; HCC = hierarchical condition category.

Table C.2. Regression-adjusted means and estimated difference-in-differences impact of CPC on selected quality-of-care process and outcome measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Arkansas

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Quality of care (percentage)												
Among patients with diabetes—HbA1c test												
Baseline	68.8	75.4	-	-		-	67.3	71.7	-	-		-
Year 1	69.6	73.6	2.6	2.6		0.312	68.5	70.5	2.3	3.0		0.437
Year 2	69.9	77.8	-1.3	2.9		0.658	68.9	74.1	-0.9	3.9		0.823
Year 3	69.7	77.9	-1.5	2.3		0.506	69.8	77.2	-3.0	2.6		0.264
Among patients with diabetes—lipid test												
Baseline	81.8	82.6	-	-		-	78.8	78.6	-	-		-
Year 1	83.3	84.1	0.1	0.9		0.957	80.8	80.1	0.5	1.3		0.665
Year 2	83.4	84.3	0.0	1.2		0.996	81.0	82.4	-1.6	1.5		0.303
Year 3	82.0	83.9	-1.0	1.3		0.449	80.3	82.1	-2.0	1.9		0.286
Among patients with diabetes—eye exam												
Baseline	51.9	48.2	-	-		-	51.9	48.8	-	-		-
Year 1	55.3	50.2	1.4	1.2		0.238	55.7	51.1	1.5	1.8		0.411
Year 2	54.5	49.2	1.7	1.2		0.171	54.5	49.7	1.7	1.8		0.365
Year 3	55.0	52.0	-0.6	1.1		0.574	56.1	53.1	-0.1	1.8		0.97
Among patients with diabetes—urine protein test												
Baseline	47.7	51.7	-	-		-	53.2	57.9	-	-		-
Year 1	50.4	54.4	-0.1	1.6		0.955	54.5	59.9	-0.7	2.4		0.773
Year 2	52.9	57.7	-0.9	2.4		0.703	57.6	61.6	0.7	2.5		0.77
Year 3	63.3	68.9	-1.6	2.7		0.561	69.7	78.8	-4.4	2.7		0.104
Among patients with ischemic vascular disease—lipid test												
Baseline	77.8	83.0	-	-		-	73.6	78.6	-	-		-
Year 1	76.0	78.1	3.0	3.4		0.37	71.7	72.7	3.9	4.7		0.402
Year 2	74.5	78.7	1.0	2.9		0.721	70.7	74.6	1.1	3.8		0.774
Year 3	73.8	78.0	1.0	1.9		0.575	71.1	74.1	2.0	2.7		0.462

Table C.2. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Among patients with diabetes—all four tests performed												
Baseline	22.6	23.9	-	-		-	23.3	25.7	-	-		-
Year 1	26.5	24.4	3.4*	2.0		0.082	28.0	25.7	4.7**	2.1		0.028
Year 2	25.7	25.7	1.3	2.2		0.543	27.2	25.0	4.6	3.0		0.124
Year 3	26.5	29.5	-1.7	1.9		0.358	28.1	33.4	-2.9	2.1		0.17
Among patients with diabetes—none of the four tests performed												
Baseline	7.9	6.7	-	-		-	7.6	7.0	-	-		-
Year 1	7.2	5.8	0.3	0.6		0.648	6.8	6.1	-0.1	1.0		0.96
Year 2	6.1	5.8	-0.9	0.6		0.124	5.7	5.4	-0.4	1.0		0.728
Year 3	4.2	3.7	-0.7	0.6		0.278	3.6	2.9	0.0	1.0		0.997
Total number of observations (treatment and comparison) across all years: patients with diabetes	121,418						43,891					
Total number of observations (treatment and comparison) across all years: patients with ischemic vascular disease	124,628						61,273					
Continuity of care (percentage)												
Percentage of PCP visits at attributed practice												
Pre-intervention	83.5	79.9	-	-	-	-	79.6	74.9	-	-	-	-
Post-intervention	72.0	66.2	2.2	2.9	3%	0.45	68.6	62.5	1.4	3.0	2%	0.652
Percentage of all visits at attributed practice												
Pre-intervention	50.2	51.0	-	-	-	-	43.1	43.8	-	-	-	-
Post-intervention	42.2	40.8	2.2	1.7	6%	0.181	37.5	36.4	1.8	1.8	5%	0.311
Bice-Boxerman Index based on PCP visits												
Pre-intervention	76.1	72.7	-	-	-	-	71.6	68.2	-	-	-	-
Post-intervention	72.7	65.2	4.0	2.5	6%	0.118	69.9	62.5	3.9	2.7	6%	0.152
Bice-Boxerman Index based on all visits												
Pre-intervention	37.1	37.3	-	-	-	-	31.0	31.0	-	-	-	-
Post-intervention	35.4	33.8	1.8	1.1	5%	0.105	31.7	30.5	1.3	1.2	4%	0.316

Table C.2. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total number of observations (treatment and comparison) across all years: measures based on PCP visits	300,984						91,066					
Total number of observations (treatment and comparison) across all years: measures based on all visits	336,120						101,262					
Transitional care and quality-of-care outcomes (annualized rate per 1,000 or percentage)												
Likelihood of 14-day follow-up visit (percentage)												
Baseline	55.8	57.3	-	-	-	-	59.4	60.9	-	-	-	-
Year 1	55.5	59.3	-2.3	1.4		0.112	58.7	62.9	-2.6	1.8		0.145
Year 2	58.5	59.5	0.5	1.5		0.734	61.7	67	0.2	2.2		0.925
Year 3	58.7	60.3	-0.2	1.6		0.895	60.9	64.8	-2.5	2.5		0.317
Years 1, 2, and 3 combined	59.9	57.8	-0.6	1.4		0.643	6.04	63.5	-1.7	2.0		0.412
Total number of observations (treatment and comparison) across all years: follow-up visit	255,324						137,509					
ACSC admissions (annualized rate per 1,000)												
Baseline	52	60	-	-	-	-	158	178	-	-	-	-
Year 1	73	76	4	3	6%	0.151	189	199	9	10	5%	0.368
Year 2	76	78	6	4	7%	0.143	190	199	10	12	6%	0.383
Year 3	78	85	1	3	1%	0.816	183	204	-1	12	-1%	0.917
Years 1, 2, and 3 combined	81	86	4	3	4%	0.214	192	206	6	9	3%	0.506
Total number of observations (treatment and comparison) across all years: ACSC admissions	968,838						256,719					
Likelihood of 30-day readmission (percentage)												
Baseline	13.3	13.5	-	-		-	16.3	17.1	-	-		-
Year 1	14.8	14.6	0.4	0.7		0.562	18.2	18.2	0.9	1.0		0.407
Year 2	14.9	14.3	0.9	0.6		0.154	18.2	18.2	0.9	0.9		0.329
Year 3	15.4	15.1	0.6	0.6		0.342	18.8	19.0	0.7	1.0		0.479
Years 1, 2, and 3 combined	15.0	14.6	0.6	0.5		0.206	18.1	18.2	0.8	0.6		0.204

Table C.2. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total number of observations (treatment and comparison) across all years: readmissions	255,324						137,509					
Likelihood of revisiting an ED within 30 days of an outpatient ED visit (percentage)												
Baseline	5.0	4.5	-	-		-	11.1	10.0	-	-		-
Year 1	4.6	4.6	-0.4**	0.2		0.033	9.4	9.1	-0.8*	0.4		0.06
Year 2	5.2	4.7	-0.1	0.2		0.689	9.7	9.0	-0.5	0.5		0.314
Year 3	5.7	5.6	-0.4*	0.2		0.096	10.7	9.9	-0.3	0.5		0.605
Years 1, 2, and 3 combined	5.4	5.2	-0.3*	0.2		0.082	10.0	9.3	-0.5	0.4		0.169
Total number of observations (treatment and comparison) across all years: ED revisit	968,838						256,719					

Source: Medicare claims data for the period October 2010 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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 post-intervention period compared with the pre-intervention period relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. For ED revisit, we also control for chronic conditions at baseline. For the readmissions and follow-up visits equations that are estimated at the discharge level, we also control for discharge-level risk factors. Number of observations includes the total number of treatment and comparison group observations across all years. For continuous quality-of-care outcome measures, we present the absolute impact estimate as well as its relative size in percentage terms. For binary quality-of-care outcome measures, we present the absolute impact estimate in only percentage points.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; ACSC = ambulatory care sensitive condition; ED = emergency department; PCP = primary care physician; HCC = hierarchical condition category.

Table C.3. Regression-adjusted means and estimated difference-in-differences impact of CPC on expenditure and utilization measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Colorado

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total Medicare expenditures ($ PBPM)												
Without CPC care management fees												
Baseline	$531	$548	-	-	-	-	$1,339	$1,396	-	-	-	-
Year 1	$640	$656	$1	$22	0%	0.958	$1,290	$1,344	$3	$94	0%	0.972
Year 2	$694	$725	-$14	$20	-2%	0.475	$1,357	$1,406	$7	$63	1%	0.906
Year 3	$729	$750	-$4	$25	0%	0.887	$1,384	$1,442	-$1	$110	0%	0.993
Years 1, 2, and 3 combined	$718	$741	-$6	$20	-1%	0.763	$1,359	$1,413	$3	$81	0%	0.967
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 0.29	*p*-val = 0.83					F = 0.02	*p*-val = 0.99				
With CPC care management sees												
Baseline	$531	$548	-	-	-	-	$1,339	$1,396	-	-	-	-
Year 1	$658	$655	$20	$22	3%	0.366	$1,321	$1,344	$34	$94	3%	0.72
Year 2	$711	$725	$3	$20	0%	0.867	$1,389	$1,406	$40	$63	3%	0.527
Year 3	$742	$750	$10	$25	1%	0.696	$1,407	$1,442	$22	$110	2%	0.844
Years 1, 2, and 3 combined	$735	$741	$10	$20	1%	0.592	$1,388	$1,413	$32	$81	2%	0.694
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 0.30	*p*-val = 0.82					F = 0.30	*p*-val = 0.82				
Expenditures by type of service ($ PBPM)												
Inpatient												
Baseline	$175	$181	-	-	-	-	$488	$498	-	-	-	-
Year 1	$223	$226	$3	$10	1%	0.728	$465	$480	-$6	$38	-1%	0.866
Year 2	$237	$240	$3	$12	1%	0.794	$479	$482	$7	$41	1%	0.874
Year 3	$240	$240	$7	$11	3%	0.539	$469	$496	-$17	$44	-3%	0.704
Years 1, 2, and 3 combined	$243	$244	$5	$9	2%	0.616	$474	$489	-$6	$35	-1%	0.875
Skilled nursing facility												
Baseline	$24	$27	-	-	-	-	$113	$128	-	-	-	-
Year 1	$45	$49	-$2	$8	-4%	0.767	$133	$132	$15	$32	12%	0.636
Year 2	$53	$60	-$5	$7	-8%	0.485	$143	$159	-$2	$21	-1%	0.936
Year 3	$58	$62	-$1	$9	-2%	0.883	$158	$153	$20	$33	14%	0.548
Years 1, 2, and 3 combined	$58	$64	-$3	$8	-5%	0.719	$150	$153	$11	$27	8%	0.688

Table C.3. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Outpatient												
Baseline	$101	$106	-	-	-	-	$219	$233	-	-	-	-
Year 1	$111	$121	-$5	$5	-4%	0.332	$197	$225	-$14	$14	-7%	0.3
Year 2	$124	$137	-$8	$5	-6%	0.105	$219	$225	$7	$8	3%	0.371
Year 3	$131	$147	-$11*	$6	-8%	0.073	$218	$247	-$16	$18	-7%	0.383
Years 1, 2, and 3 combined	$124	$137	-$8**	$4	-6%	0.04	$209	$230	-$7	$11	-3%	0.485
Physician (primary care, specialist, and other noninstitutional providers)												
Baseline	$188	$184	-	-	-	-	$356	$348	-	-	-	-
Year 1	$199	$189	$5	$5	3%	0.258	$319	$304	$7	$14	2%	0.61
Year 2	$207	$203	$0	$4	0%	0.914	$319	$316	-$5	$10	-2%	0.604
Year 3	$219	$211	$4	$5	2%	0.406	$330	$319	$3	$14	1%	0.836
Years 1, 2, and 3 combined	$214	$207	$3	$4	1%	0.456	$325	$315	$2	$10	0%	0.871
Primary care physician												
Baseline	$32	$32	-	-	-	-	$64	$63	-	-	-	-
Year 1	$40	$41	$0	$1	0%	0.971	$63	$62	$0	$3	0%	0.952
Year 2	$42	$42	$0	$1	-1%	0.786	$67	$64	$1	$3	2%	0.624
Year 3	$47	$46	$1	$1	2%	0.515	$75	$73	$0	$4	0%	0.969
Years 1, 2, and 3 combined	$41	$41	$0	$1	1%	0.78	$69	$67	$0	$3	1%	0.872
Specialist												
Baseline	$94	$94	-	-	-	-	$183	$183	-	-	-	-
Year 1	$108	$108	-$1	$4	-1%	0.834	$157	$157	$0	$8	0%	0.983
Year 2	$108	$109	-$1	$3	-1%	0.822	$151	$161	-$10	$11	-6%	0.339
Year 3	$108	$105	$2	$3	2%	0.597	$151	$149	$2	$9	1%	0.853
Years 1, 2, and 3 combined	$102	$100	$1	$2	1%	0.561	$154	$157	-$3	$6	-2%	0.655
Home health												
Baseline	$17	$20	-	-	-	-	$68	$80	-	-	-	-
Year 1	$23	$28	-$1	$2	-3%	0.558	$67	$79	$0	$9	0%	0.995
Year 2	$28	$32	-$1	$2	-3%	0.668	$76	$83	$5	$4	7%	0.212
Year 3	$32	$33	$3	$2	9%	0.123	$84	$84	$12*	$7	16%	0.074
Years 1, 2, and 3 combined	$31	$34	$0	$1	1%	0.719	$79	$85	$6	$5	8%	0.251
Hospice												
Baseline	-$1	$3	-	-	-	-	$13	$29	-	-	-	-
Year 1	$12	$15	$1	$3	7%	0.683	$44	$56	$4	$7	8%	0.556
Year 2	$20	$26	-$2	$4	-9%	0.571	$63	$77	$1	$10	2%	0.925
Year 3	$23	$30	-$3	$5	-11%	0.552	$67	$74	$8	$16	13%	0.623
Years 1, 2, and 3 combined	$22	$27	-$2	$3	-7%	0.642	$62	$73	$4	$9	7%	0.642

Table C.3. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
DME												
Baseline	$27	$26	-	-	-	-	$81	$82	-	-	-	-
Year 1	$26	$27	-$1	$1	-3%	0.367	$66	$68	-$2	$3	-3%	0.434
Year 2	$25	$26	-$1	$1	-4%	0.281	$59	$65	-$6*	$4	-9%	0.084
Year 3	$26	$28	-$2	$2	-8%	0.213	$58	$69	-$11**	$5	-16%	0.026
Years 1, 2, and 3 combined	$27	$28	-$1	$1	-5%	0.155	$61	$67	-$6**	$3	-10%	0.02
Utilization (annualized rate per 1,000 beneficiaries)												
Hospitalizations												
Baseline	190	214	-	-	-	-	503	560	-	-	-	-
Year 1	230	248	6	11	2%	0.603	505	531	32	40	7%	0.425
Year 2	226	254	-4	10	-2%	0.695	480	533	4	22	1%	0.844
Year 3	237	257	4	10	2%	0.727	495	555	-2	44	0%	0.955
Years 1, 2, and 3 combined	241	264	2	10	1%	0.867	501	547	11	32	2%	0.732
Total ED visits												
Baseline	481	511	-	-	-	-	1,111	1,166	-	-	-	-
Year 1	549	573	6	18	1%	0.723	1,138	1,139	53	49	5%	0.278
Year 2	589	641	-22	18	-3%	0.214	1,178	1,229	4	38	0%	0.92
Year 3	632	662	1	17	0%	0.958	1,272	1,281	45	65	4%	0.488
Years 1, 2, and 3 combined	611	646	-5	16	-1%	0.756	1,203	1,223	34	41	3%	0.413
Outpatient ED visits												
Baseline	373	388	-	-	-	-	775	796	-	-	-	-
Year 1	409	419	4	13	1%	0.731	776	768	29	32	4%	0.366
Year 2	448	479	-17	14	-4%	0.229	828	838	10	30	1%	0.731
Year 3	475	495	-6	16	-1%	0.707	886	867	39	40	5%	0.335
Years 1, 2, and 3 combined	454	474	-6	12	-1%	0.601	827	821	26	27	3%	0.341
Outpatient ED visits that led to observation stays												
Baseline	34	35	-	-	-	-	82	74	-	-	-	-
Year 1	43	40	5	4	11%	0.178	89	80	1	10	1%	0.916
Year 2	56	50	7	5	13%	0.167	108	95	5	11	5%	0.63
Year 3	55	51	4	4	9%	0.314	109	103	-1	12	-1%	0.926
Years 1, 2, and 3 combined	54	49	6	4	12%	0.145	103	93	2	10	2%	0.855
Primary care visits												
Baseline	5,761	5,801	-	-	-	-	10,395	10,225	-	-	-	-
Year 1	6,356	6,125	270***	92	4%	0.003	10,625	10,011	445*	250	4%	0.075
Year 2	6,554	6,516	78	129	1%	0.547	10,974	10,375	430	298	4%	0.149
Year 3	6,864	6,855	48	147	1%	0.745	11,580	10,974	436	424	4%	0.304
Years 1, 2, and 3 combined	6,836	6,747	125	116	2%	0.279	11,170	10,551	442	294	4%	0.133

Table C.3. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Specialist visits												
Baseline	9,909	10,243	-	-	-	-	18,677	19,372	-	-	-	-
Year 1	10,237	10,560	11	163	0%	0.945	16,823	17,482	35	491	0%	0.943
Year 2	10,458	10,961	-170	208	-2%	0.414	16,308	17,326	-324	454	-2%	0.476
Year 3	10,698	11,044	-12	188	0%	0.949	16,474	17,101	67	640	0%	0.916
Years 1, 2, and 3 combined	10,793	11,194	-60	177	-1%	0.735	16,633	17,410	-77	468	0%	0.87
Office-based primary care visits												
Baseline	3,697	3,669	-	-	-	-	6,239	5,662	-	-	-	-
Year 1	3,899	3,700	171***	57	4%	0.003	6,103	5,339	186	150	3%	0.216
Year 2	3,928	3,782	118	92	3%	0.197	6,009	5,282	150	191	3%	0.433
Year 3	4,004	3,879	98	120	3%	0.415	6,001	5,319	104	234	2%	0.656
Years 1, 2, and 3 combined	4,031	3,874	128	87	3%	0.141	6,045	5,321	146	171	2%	0.391
Total number of observations (treatment and comparison) across all years	755,806						172,329					

Source: Medicare claims data for the period October 2011 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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, 2, or 3 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. Expenditures on physician services includes expenditures on primary care physician services, specialist services, and services provided by other noninstitutional providers (the third category is not shown separately). For Medicare service use measures, observation stays are included in measures of outpatient ED visits and total ED visits. Primary care visits include office-based primary care visits as well as visits in other settings.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; DME= durable medical equipment; ED = emergency department; PBPM = per beneficiary per month; HCC = hierarchical condition category.

Table C.4. Regression-adjusted means and estimated difference-in-differences impact of CPC on selected quality-of-care process and outcome measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Colorado

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Quality of care (percentage)												
Among patients with diabetes—HbA1c test												
Baseline	73.4	72.4	-	-		-	68.9	67.2	-	-		-
Year 1	74.0	76.3	-3.3	2.1		0.121	71.7	76.7	-6.7	4.2		0.111
Year 2	77.6	76.2	0.4	3.4		0.905	75.2	75.6	-2.1	4.4		0.626
Year 3	76.0	74.7	0.4	3.7		0.92	73.9	71.9	0.3	5.5		0.951
Among patients with diabetes—lipid test												
Baseline	83.2	80.5	-	-		-	80.0	73.9	-	-		-
Year 1	83.0	81.2	-0.9	1.8		0.626	81.0	78.9	-4.1	2.5		0.106
Year 2	82.8	79.5	0.7	1.9		0.705	81.0	74.2	0.7	3.4		0.834
Year 3	81.4	78.2	0.5	1.8		0.791	77.7	75.1	-3.5	3.9		0.373
Among patients with diabetes—eye exam												
Baseline	52.9	56.5	-	-		-	52.3	57.2	-	-		-
Year 1	55.3	56.9	2.0	2.8		0.483	55.7	55.2	5.4	4.2		0.195
Year 2	55.5	56.1	2.9**	1.4		0.042	55.8	54.2	6.5*	3.4		0.056
Year 3	54.5	55.5	2.5	2.1		0.226	53.0	52.6	5.4	4.0		0.173
Among patients with diabetes—urine protein test												
Baseline	59.1	57.1	-	-		-	64.9	62.5	-	-		-
Year 1	60.4	56.7	1.7	2.8		0.534	66.2	60.1	3.7	2.5		0.132
Year 2	63.2	58.9	2.3	2.6		0.391	66.9	64.6	-0.1	2.4		0.958
Year 3	61.9	62.4	-2.5	4.0		0.537	73.7	67.9	3.4	3.8		0.365
Among patients with ischemic vascular disease—lipid test												
Baseline	81.8	77.9	-	-		-	76.8	71.6	-	-		-
Year 1	79.9	76.6	-0.6	1.5		0.711	76.6	73.2	-1.8	2.8		0.523
Year 2	77.7	74.1	-0.4	2.0		0.86	73.6	69.8	-1.3	4.1		0.743
Year 3	73.4	72.7	-3.3*	1.9		0.09	70.1	70.1	-5.1	3.8		0.179

Table C.4. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Among patients with diabetes—all four tests performed												
Baseline	27.8	28.0	-	-		-	27.8	26.9	-	-		-
Year 1	29.5	28.6	0.9	1.8		0.602	30.8	27.9	2.0	2.7		0.459
Year 2	30.5	28.8	1.8	2.2		0.409	31.3	28.6	1.8	2.6		0.49
Year 3	25.0	28.5	-3.4	2.6		0.199	27.1	28.9	-2.6	3.3		0.433
Among patients with diabetes—none of the four tests performed												
Baseline	6.7	7.8	-	-		-	6.5	7.0	-	-		-
Year 1	5.2	5.5	0.8	0.7		0.264	4.9	3.6	1.9	1.5		0.227
Year 2	4.8	5.3	0.5	1.0		0.59	4.6	5.5	-0.3	1.0		0.727
Year 3	3.2	4.0	0.3	1.0		0.763	2.6	2.8	0.4	1.5		0.807
Total number of observations (treatment and comparison) across all years: patients with diabetes	73,820						23,756					
Total number of observations (treatment and comparison) across all years: patients with ischemic vascular disease	70,943						32,458					
Continuity of care (percentage)												
Percentage of PCP visits at attributed practice												
Pre-intervention	80.0	79.1	-	-	-	-	76.9	75.2	-	-	-	-
Post-intervention	65.6	63.4	1.4	2.2	2%	0.526	64.2	62.4	0.0	2.1	0%	0.986
Percentage of all visits at attributed practice												
Pre-intervention	46.3	46.7	-	-	-	-	41.2	40.4	-	-	-	-
Post-intervention	37.5	36.3	1.7	1.4	5%	0.224	36.3	34.5	1.1	1.6	3%	0.497
Bice-Boxerman Index based on PCP visits												
Pre-intervention	71.5	70.8	-	-	-	-	68.7	67.7	-	-	-	-
Post-intervention	63.2	60.0	2.5	2.2	4%	0.252	62.7	59.3	2.4	2.3	4%	0.295
Bice-Boxerman Index based on all visits												
Pre-intervention	33.5	34.0	-	-	-	-	29.3	28.5	-	-	-	-
Post-intervention	30.6	30.0	1.1	1.1	4%	0.315	29.8	28.3	0.8	1.3	3%	0.564

Table C.4. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total number of observations (treatment and comparison) across all years: measures based on PCP visits	201,432						56,872					
Total number of observations (treatment and comparison) across all years: measures based on all visits	253,688						69,394					
Transitional care and quality of care outcomes (annualized rate per 1,000 or percentage)												
Likelihood of 14-day follow-up visit (percentage)												
Baseline	65.5	64.4	-	-	-	-	72.3	70.5	-	-	-	-
Year 1	66.8	64.1	1.6	1.6		0.332	73.2	69.9	1.5	1.8		0.409
Year 2	67.3	65.2	0.9	1.1		0.425	74.6	72.8	0	1.7		0.984
Year 3	68.1	64.2	2.6	2.2		0.235	74.2	71.3	1.1	1.9		0.561
Years 1, 2, and 3 combined	67.9	65.0	1.7	1.4		0.228	74.2	71.5	0.8	1.4		0.553
Total number of observations (treatment and comparison) across all years: follow-up visit	166,862						80,228					
ACSC admissions (annualized rate per 1,000)												
Baseline	28	37	-	-	-	-	98	114	-	-	-	-
Year 1	40	50	-1	3	-2%	0.78	116	137	-5	14	-4%	0.727
Year 2	40	53	-4	3	-8%	0.256	112	141	-13	10	-10%	0.207
Year 3	44	49	4	4	11%	0.242	118	133	1	16	0%	0.975
Years 1, 2, and 3 combined	45	54	0	3	0%	0.996	119	141	-6	11	-4%	0.593
Total number of observations (treatment and comparison) across all years: ACSC admissions	755,806						172,329					
Likelihood of 30-day readmission (percentage)												
Baseline	10.9	10.7	-	-		-	14.3	14.6	-	-		-
Year 1	11.8	12.8	-1.3	0.8		0.127	15.2	15.1	0.3	1.3		0.801
Year 2	11.2	12.6	-1.7**	0.8		0.036	14.5	15.9	-1.2	1.3		0.36
Year 3	12.0	12.1	-0.3	0.8		0.665	15.4	16.2	-0.6	1.0		0.56
Years 1, 2, and 3 combined	11.9	12.7	-1.1**	0.5		0.041	15.2	15.9	-0.5	0.8		0.558

Table C.4. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total number of observations (treatment and comparison) across all years: readmissions	166,862						80,228					
Likelihood of an ED revisit within 30 days of an outpatient ED visit (percentage)												
Baseline	3.8	4.2	-	-		-	9.4	11.0	-	-		-
Year 1	3.9	4.0	0.3	0.2		0.179	8.8	8.2	2.2***	0.7		0.004
Year 2	4.2	4.3	0.3	0.2		0.283	9.3	8.8	2.0**	0.8		0.011
Year 3	4.7	4.9	0.2	0.2		0.423	10.0	9.6	2.0**	1.0		0.041
Years 1, 2, and 3 combined	4.5	4.6	0.2	0.2		0.164	9.3	8.9	2.1***	0.7		0.002
Total number of observations (treatment and comparison) across all years: ED revisit	755,806						172,329					

Source: Medicare claims data for the period October 2010 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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 postintervention period compared with the preintervention period relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. For ED revisit, we also control for chronic conditions at baseline. For the readmissions and follow-up visits equations that are estimated at the discharge level, we also control for discharge-level risk factors. Number of observations includes the total number of treatment and comparison group observations across all years. For continuous quality-of-care outcome measures, we present the absolute impact estimate as well as its relative size in percentage terms. For binary quality-of-care outcome measures, we present the absolute impact estimate in only percentage points.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; ACSC = ambulatory care sensitive condition; ED = emergency department; PCP = primary care physician; HCC = hierarchical condition category.

Table C.5. Regression-adjusted means and estimated difference-in-differences impact of CPC on expenditure and utilization measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for New Jersey

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total Medicare expenditures ($ PBPM)												
Without CPC care management fees												
Baseline	$640	$650	-	-	-	-	$1,441	$1,465	-	-	-	-
Year 1	$802	$857	-$45***	$15	-5%	0.004	$1,549	$1,624	-$51	$38	-3%	0.18
Year 2	$879	$922	-$33*	$18	-3%	0.063	$1,623	$1,692	-$46	$37	-3%	0.217
Year 3	$971	$966	$14	$18	1%	0.449	$1,779	$1,812	-$10	$48	-1%	0.836
Years 1, 2, and 3 combined	$931	$960	-$19	$14	-2%	0.177	$1,674	$1,733	-$36	$29	-2%	0.22
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 5.66	*p*-val = 0.00					F = 0.88	*p*-val = 0.45				
With CPC care management fees												
Baseline	$640	$650	-	-	-	-	$1,441	$1,465	-	-	-	-
Year 1	$821	$857	-$26*	$16	-3%	0.091	$1,578	$1,624	-$22	$38	-1%	0.559
Year 2	$896	$921	-$16	$18	-2%	0.373	$1,652	$1,692	-$16	$37	-1%	0.66
Year 3	$984	$966	$27	$18	3%	0.147	$1,800	$1,812	$11	$48	1%	0.813
Years 1, 2, and 3 combined	$948	$960	-$3	$14	0%	0.838	$1,701	$1,733	-$9	$29	-1%	0.753
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 3.54	*p*-val = 0.01					F = 0.20	*p*-val = 0.90				
Expenditures by type of service ($ PBPM)												
Inpatient												
Baseline	$197	$201	-	-	-	-	$511	$516	-	-	-	-
Year 1	$272	$302	-$26***	$9	-8%	0.005	$567	$594	-$21	$25	-3%	0.404
Year 2	$297	$323	-$22**	$11	-7%	0.043	$579	$624	-$40	$24	-6%	0.101
Year 3	$335	$327	$13	$10	4%	0.21	$659	$654	$10	$35	2%	0.768
Years 1, 2, and 3 combined	$319	$334	-$10	$8	-3%	0.192	$610	$632	-$17	$21	-3%	0.41
Skilled nursing facility												
Baseline	$36	$44	-	-	-	-	$138	$158	-	-	-	-
Year 1	$71	$84	-$5	$4	-6%	0.207	$180	$213	-$14	$12	-7%	0.251
Year 2	$84	$98	-$6	$4	-6%	0.136	$200	$240	-$21*	$11	-9%	0.07
Year 3	$101	$107	$2	$5	2%	0.67	$236	$261	-$5	$12	-2%	0.651
Years 1, 2, and 3 combined	$95	$106	-$3	$4	-3%	0.424	$213	$245	-$13	$8	-6%	0.112

Table C.5. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Outpatient												
Baseline	$91	$93	-	-	-	-	$188	$182	-	-	-	-
Year 1	$104	$112	-$6*	$3	-6%	0.052	$189	$190	-$8	$9	-4%	0.396
Year 2	$118	$126	-$7	$6	-6%	0.215	$204	$198	-$1	$11	0%	0.945
Year 3	$130	$136	-$5	$4	-4%	0.228	$215	$224	-$15	$12	-7%	0.2
Years 1, 2, and 3 combined	$121	$128	-$6*	$4	-5%	0.085	$202	$203	-$8	$7	-4%	0.29
Physician (primary care, specialist, and other noninstitutional providers)												
Baseline	$283	$269	-	-	-	-	$490	$462	-	-	-	-
Year 1	$302	$296	-$7*	$4	-2%	0.082	$476	$460	-$11	$11	-2%	0.296
Year 2	$316	$300	$2	$4	1%	0.7	$483	$451	$4	$10	1%	0.669
Year 3	$329	$316	$0	$5	0%	0.993	$496	$477	-$9	$10	-2%	0.365
Years 1, 2, and 3 combined	$324	$312	-$2	$4	0%	0.679	$487	$465	-$5	$8	-1%	0.504
Primary care physician												
Baseline	$37	$40	-	-	-	-	$66	$71	-	-	-	-
Year 1	$49	$54	-$3**	$1	-6%	0.045	$75	$81	$0	$2	0%	0.892
Year 2	$51	$55	$0	$1	-1%	0.744	$78	$83	$1	$2	1%	0.745
Year 3	$56	$57	$2	$2	4%	0.291	$85	$89	$1	$2	2%	0.485
Years 1, 2, and 3 combined	$50	$53	$0	$1	0%	0.955	$81	$86	$1	$2	1%	0.676
Specialist												
Baseline	$149	$140	-	-	-	-	$270	$249	-	-	-	-
Year 1	$172	$172	-$9**	$4	-5%	0.049	$257	$247	-$11	$8	-4%	0.182
Year 2	$178	$164	$6	$4	3%	0.181	$260	$236	$4	$8	1%	0.659
Year 3	$179	$168	$3	$4	2%	0.395	$263	$241	$1	$7	0%	0.901
Years 1, 2, and 3 combined	$169	$160	$0	$3	0%	0.996	$262	$243	-$2	$7	-1%	0.771
Home health												
Baseline	$18	$24	-	-	-	-	$62	$82	-	-	-	-
Year 1	$24	$33	-$3**	$2	-10%	0.037	$61	$85	-$4	$3	-5%	0.266
Year 2	$29	$36	-$1	$1	-2%	0.609	$69	$89	$0	$4	0%	0.964
Year 3	$35	$41	$0	$2	1%	0.799	$77	$101	-$5	$3	-6%	0.166
Years 1, 2, and 3 combined	$33	$40	-$1	$1	-3%	0.306	$72	$95	-$3	$3	-4%	0.302
Hospice												
Baseline	-$1	$1	-	-	-	-	$7	$14	-	-	-	-
Year 1	$12	$13	$1	$2	8%	0.593	$36	$43	$1	$7	2%	0.921
Year 2	$20	$21	$1	$4	4%	0.818	$54	$58	$4	$10	7%	0.716
Year 3	$23	$22	$3	$4	17%	0.349	$59	$56	$11	$8	23%	0.195
Years 1, 2, and 3 combined	$21	$21	$2	$3	10%	0.526	$52	$55	$5	$7	11%	0.472

Table C.5. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
DME												
Baseline	$17	$19	-	-	-	-	$46	$51	-	-	-	-
Year 1	$18	$18	$2*	$1	10%	0.061	$40	$39	$5**	$3	15%	0.038
Year 2	$16	$17	$1	$2	6%	0.593	$35	$32	$8**	$3	29%	0.017
Year 3	$17	$19	$1	$2	6%	0.628	$37	$39	$3	$6	9%	0.564
Years 1, 2, and 3 combined	$18	$19	$1	$1	7%	0.385	$37	$37	$6*	$3	17%	0.084
Utilization (annualized rate per 1,000 beneficiaries)												
Hospitalizations												
Baseline	208	212	-	-	-	-	500	509	-	-	-	-
Year 1	261	279	-14*	8	-5%	0.083	547	568	-12	20	-2%	0.563
Year 2	272	285	-10	10	-3%	0.309	551	563	-3	17	0%	0.867
Year 3	295	293	6	7	2%	0.39	594	616	-14	21	-2%	0.524
Years 1, 2, and 3 combined	292	302	-6	7	-2%	0.432	575	593	-10	16	-2%	0.558
Total ED visits												
Baseline	446	470	-	-	-	-	934	976	-	-	-	-
Year 1	518	543	-1	10	0%	0.939	1,006	1,033	15	32	1%	0.639
Year 2	547	567	3	12	1%	0.78	1,030	1,034	38	26	4%	0.152
Year 3	582	612	-5	16	-1%	0.734	1,103	1,181	-37	39	-3%	0.336
Years 1, 2, and 3 combined	572	597	-1	10	0%	0.924	1,058	1,094	5	23	0%	0.824
Outpatient ED visits												
Baseline	304	319	-	-	-	-	557	580	-	-	-	-
Year 1	322	329	7	7	2%	0.309	557	555	25	23	5%	0.27
Year 2	339	349	5	8	1%	0.565	572	561	35*	19	7%	0.07
Year 3	352	378	-11	13	-3%	0.396	596	647	-28	26	-4%	0.293
Years 1, 2, and 3 combined	345	360	0	7	0%	0.984	575	587	11	15	2%	0.485
Outpatient ED visits that led to observation stays												
Baseline	32	25	-	-	-	-	67	51	-	-	-	-
Year 1	36	29	1	3	2%	0.749	73	54	3	6	5%	0.599
Year 2	42	37	-2	3	-5%	0.369	79	64	-1	6	-2%	0.841
Year 3	48	43	-2	3	-4%	0.574	89	81	-9	8	-9%	0.284
Years 1, 2, and 3 combined	44	38	-1	2	-3%	0.602	81	67	-2	5	-3%	0.677
Primary care visits												
Baseline	5,777	6,166	-	-	-	-	9,356	10,177	-	-	-	-
Year 1	6,496	7,187	-303	186	-4%	0.104	10,423	11,291	-47	296	0%	0.873
Year 2	6,740	7,292	-163	203	-2%	0.424	10,443	11,485	-221	400	-2%	0.58
Year 3	7,216	7,542	63	214	1%	0.769	11,282	12,156	-53	354	0%	0.881
Years 1, 2, and 3 combined	7,106	7,629	-122	195	-2%	0.533	10,871	11,805	-108	324	-1%	0.738

Table C.5. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Specialist visits												
Baseline	15,935	14,986	-	-	-	-	27,712	26,292	-	-	-	-
Year 1	16,478	16,269	-741***	173	-4%	<.001	26,315	25,883	-989**	424	-4%	0.02
Year 2	17,380	16,876	-445**	202	-2%	0.028	26,641	25,845	-625	418	-2%	0.136
Year 3	17,942	17,267	-275	229	-2%	0.231	27,030	26,383	-774	526	-3%	0.141
Years 1, 2, and 3 combined	17,954	17,452	-483***	187	-3%	0.01	26,839	26,205	-798**	385	-3%	0.038
Office-based primary care visits												
Baseline	3,827	3,740	-	-	-	-	5,335	5,245	-	-	-	-
Year 1	3,847	4,024	-264**	110	-6%	0.016	5,157	5,265	-198	134	-4%	0.137
Year 2	3,763	3,880	-204**	103	-5%	0.047	4,821	4,952	-222	141	-4%	0.115
Year 3	3,730	3,836	-193**	96	-5%	0.043	4,730	4,852	-213	145	-4%	0.142
Years 1, 2, and 3 combined	3,830	3,963	-221**	99	-5%	0.025	4,906	5,030	-210	131	-4%	0.109
Total number of observations (treatment and comparison) across all years	589,642						161,590					

Source: Medicare claims data for the period October 2011 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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, 2, or 3 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. Expenditures on physician services includes expenditures on primary care physician services, specialist services, and services provided by other noninstitutional providers (the third category is not shown separately) For Medicare service use measures, observation stays are included in measures of outpatient ED visits and total ED visits. Primary care visits include office-based primary care visits as well as visits in other settings.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; DME= durable medical equipment; ED = emergency department; PBPM = per beneficiary per month; HCC = hierarchical condition category.

Table C.6. Regression-adjusted means and estimated difference-in-differences impact of CPC on selected quality-of-care process and outcome measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for New Jersey

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Quality of care (percentage)												
Among patients with diabetes—HbA1c test												
Baseline	86.0	81.5	-	-		-	81.4	78.1	-	-		-
Year 1	85.9	84.6	-3.2**	1.6		0.046	82.4	82.8	-3.7	2.3		0.108
Year 2	87.3	85.6	-2.8	1.9		0.142	84.8	85.3	-3.8	2.7		0.148
Year 3	87.8	86.2	-2.9	1.8		0.101	85.9	83.4	-0.9	2.5		0.728
Among patients with diabetes—lipid test												
Baseline	87.9	86.6	-	-		-	85.6	87.9	-	-		-
Year 1	88.1	87.8	-0.9	1.1		0.382	86.3	88.3	0.2	1.3		0.872
Year 2	91.6	88.9	1.4	3.1		0.659	89.5	87.1	4.6	3.9		0.242
Year 3	90.8	88.5	1.0	2.4		0.68	88.4	87.8	2.8	2.3		0.216
Among patients with diabetes—eye exam												
Baseline	62.2	56.8	-	-		-	64.0	53.9	-	-		-
Year 1	62.8	57.9	-0.5	1.6		0.773	65.5	58.1	-2.7	3.2		0.397
Year 2	61.9	61.6	-5.0***	1.7		0.003	62.2	61.7	-9.7***	2.4		<.001
Year 3	61.9	61.6	-5.1***	1.4		<.001	62.2	58.9	-6.8***	2.1		0.001
Among patients with diabetes—urine protein test												
Baseline	65.0	63.7	-	-		-	68.0	66.0	-	-		-
Year 1	69.8	66.0	2.6	1.9		0.179	71.9	68.4	1.5	2.5		0.543
Year 2	70.5	67.3	2.0	1.9		0.298	72.4	68.6	1.8	2.8		0.517
Year 3	66.4	73.4	-8.3***	2.9		0.004	76.6	79.7	-5.1*	2.9		0.077
Among patients with ischemic vascular disease—lipid test												
Baseline	87.8	85.6	-	-		-	86.4	85.1	-	-		-
Year 1	86.4	84.7	-0.5	1.5		0.746	84.3	83.7	-0.7	1.1		0.536
Year 2	87.5	85.1	0.3	1.7		0.866	85.3	83.5	0.6	1.7		0.736
Year 3	85.9	83.1	0.7	2.0		0.717	83.7	80.8	1.7	2.3		0.468

Table C.6. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Among patients with diabetes—all four tests performed												
Baseline	39.8	35.8	-	-		-	40.9	36.9	-	-		-
Year 1	42.6	37.1	1.6	1.6		0.312	45.2	38.6	2.7	2.5		0.28
Year 2	42.7	41.4	-2.6	2.8		0.35	42.7	39.2	-0.4	3.7		0.917
Year 3	37.9	40.4	-6.5***	2.2		0.004	42.7	41.1	-2.4	2.6		0.356
Among patients with diabetes—none of the four tests performed												
Baseline	4.0	5.0	-	-		-	4.1	5.7	-	-		-
Year 1	3.8	3.8	0.9	0.6		0.138	3.9	3.8	1.6	1.2		0.163
Year 2	3.2	4.2	0.0	0.8		0.987	3.3	3.9	1.0	1.6		0.546
Year 3	2.4	2.5	1.0*	0.6		0.1	2.3	2.7	1.1	1.1		0.285
Total number of observations (treatment and comparison) across all years: patients with diabetes	55,215						19,044					
Total number of observations (treatment and comparison) across all years: patients with ischemic vascular disease	68,643						36,045					
Continuity of care (percentage)												
Percentage of PCP visits at attributed practice												
Pre-intervention	83.9	81.2	-	-	-	-	81.0	78.6	-	-	-	-
Post-intervention	73.0	69.7	0.6	1.6	1%	0.706	71.2	66.7	2.1	2.2	3%	0.348
Percentage of all visits at attributed practice												
Pre-intervention	39.9	40.4	-	-	-	-	32.2	33.3	-	-	-	-
Post-intervention	32.7	33.6	-0.3	1.1	-1%	0.782	28.5	29.4	0.2	1.4	1%	0.897
Bice-Boxerman Index based on PCP visits												
Pre-intervention	78.1	75.0	-	-	-	-	75.6	73.0	-	-	-	-
Post-intervention	72.3	69.9	-0.7	1.3	-1%	0.586	71.5	69.0	0.0	1.4	0%	0.985

Table C.6. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Bice-Boxerman Index based on all visits												
Pre-intervention	30.4	31.1	-	-	-	-	24.8	26.5	-	-	-	-
Post-intervention	28.3	29.4	-0.3	0.6	-1%	0.553	25.5	27.1	0.1	0.5	1%	0.79
Total number of observations (treatment and comparison) across all years: measures based on PCP visits	170,428						54,250					
Total number of observations (treatment and comparison) across all years: measures based on all visits	202,436						62,758					
Transitional care and quality of care outcomes (annualized rate per 1,000 or percentage)												
Likelihood of 14-day follow-up visit (percentage)												
Baseline	72	72.3	-	-		-	75.7	76.3	-	-		-
Year 1	73.5	73.3	0.5	1.1		0.639	77.2	78.3	-0.6	1.3		0.648
Year 2	74.5	75.3	-0.5	0.9		0.541	78.2	79.7	-0.9	1.4		0.521
Year 3	74	74.4	-0.1	1		0.95	77.3	78.4	-0.6	1.3		0.664
Years 1, 2, and 3 combined	74.5	74.9	-0.1	0.8		0.945	77.8	79.0	-0.7	1.2		0.55
Total number of observations (treatment and comparison) across all years: follow-up visit	134,871						75,222					
ACSC admissions (annualized rate per 1,000)												
Baseline	37	39	-	-	-	-	105	116	-	-	-	-
Year 1	59	62	-1	3	-1%	0.752	152	156	8	10	5%	0.392
Year 2	60	60	2	3	3%	0.598	152	149	15	9	11%	0.114
Year 3	64	68	-2	3	-3%	0.436	153	173	-8	10	-5%	0.423
Years 1, 2, and 3 combined	67	69	0	3	-1%	0.854	158	164	5	7	3%	0.47
Total number of observations (treatment and comparison) across all years: ACSC admissions	589,642						161,590					

Table C.6. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Likelihood of 30-day readmission (percentage)												
Baseline	13.5	13.7	-	-		-	16.1	16.3	-	-		-
Year 1	15.2	15.5	-0.1	1.1		0.926	18.9	18.3	0.9	1.3		0.496
Year 2	14.9	15.2	-0.1	0.9		0.907	18.3	17.6	0.9	1.2		0.424
Year 3	15.3	15.6	-0.1	0.9		0.907	18.3	18.7	-0.2	1.2		0.854
Years 1, 2, and 3 combined	15.1	15.4	-0.1	0.9		0.909	18.4	18.1	0.5	1.1		0.646
Total number of observations (treatment and comparison) across all years: readmissions	134,871						75,222					
Likelihood of an ED revisit within 30 days of an outpatient ED visit (percentage)												
Baseline	3.0	3.3	-	-		-	6.7	7.5	-	-		-
Year 1	3.1	3.1	0.3	0.2		0.123	6.4	6.4	0.7	0.4		0.119
Year 2	3.3	3.4	0.2	0.2		0.208	6.4	6.4	0.7	0.7		0.34
Year 3	3.4	3.9	-0.2	0.3		0.447	6.4	7.9	-0.7	0.7		0.343
Years 1, 2, and 3 combined	3.4	3.7	0.1	0.2		0.607	6.4	6.9	0.2	0.5		0.671
Total number of observations (treatment and comparison) across all years: ED revisit	589,642						161,562					

Source: Medicare claims data for the period October 2010 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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 postintervention period compared with the preintervention period relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. For ED revisit, we also control for chronic conditions at baseline. For the readmissions and follow-up visits equations that are estimated at the discharge level, we also control for discharge-level risk factors. Number of observations includes the total number of treatment and comparison group observations across all years. For continuous quality-of-care outcome measures, we present the absolute impact estimate as well as its relative size in percentage terms. For binary quality-of-care outcome measures, we present the absolute impact estimate in only percentage points.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; ACSC = ambulatory care sensitive condition; ED = emergency department; PCP = primary care physician; HCC = hierarchical condition category.

Table C.7. Regression-adjusted means and estimated difference-in-differences impact of CPC on expenditure and utilization measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for New York

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total Medicare expenditures ($ PBPM)												
Without CPC care management fees												
Baseline	$588	$590	-	-	-	-	$1,300	$1,287	-	-	-	-
Year 1	$733	$750	-$16	$21	-2%	0.468	$1,387	$1,442	-$68	$51	-5%	0.191
Year 2	$807	$828	-$19	$19	-2%	0.318	$1,483	$1,497	-$27	$47	-2%	0.571
Year 3	$867	$904	-$36**	$16	-4%	0.024	$1,543	$1,601	-$71*	$42	-4%	0.092
Years 1, 2, and 3 combined	$834	$862	-$26	$16	-3%	0.117	$1,482	$1,526	-$56	$40	-4%	0.159
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 1.92	*p*-val = 0.13					F = 1.52	*p*-val = 0.21				
With CPC care management fees												
Baseline	$588	$589	-	-	-	-	$1,300	$1,288	-	-	-	-
Year 1	$752	$749	$4	$21	0%	0.859	$1,415	$1,442	-$39	$51	-3%	0.444
Year 2	$825	$828	-$1	$19	0%	0.962	$1,512	$1,497	$2	$47	0%	0.969
Year 3	$880	$904	-$22	$16	-2%	0.164	$1,565	$1,601	-$49	$42	-3%	0.239
Years 1, 2, and 3 combined	$851	$862	-$9	$16	-1%	0.591	$1,508	$1,526	-$30	$40	-2%	0.451
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 1.23	*p*-val = 0.31					F = 1.07	*p*-val = 0.36				
Expenditures by type of service ($ PBPM)												
Inpatient												
Baseline	$206	$192	-	-	-	-	$517	$483	-	-	-	-
Year 1	$273	$283	-$24	$15	-7%	0.122	$557	$598	-$74*	$39	-12%	0.059
Year 2	$304	$311	-$21**	$10	-6%	0.036	$597	$592	-$29	$26	-5%	0.273
Year 3	$317	$329	-$26***	$10	-8%	0.008	$597	$616	-$52*	$26	-8%	0.05
Years 1, 2, and 3 combined	$312	$322	-$24**	$10	-7%	0.013	$588	$606	-$52**	$24	-8%	0.035
Skilled nursing facility												
Baseline	$26	$35	-	-	-	-	$99	$111	-	-	-	-
Year 1	$54	$60	$3	$5	4%	0.534	$139	$145	$5	$11	3%	0.672
Year 2	$67	$78	-$2	$5	-3%	0.706	$162	$180	-$6	$16	-3%	0.707
Year 3	$80	$88	$1	$4	1%	0.845	$184	$198	-$2	$11	-1%	0.88
Years 1, 2, and 3 combined	$74	$83	$0	$4	0%	0.953	$166	$179	-$1	$11	-1%	0.907

Table C.7. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Outpatient												
Baseline	$87	$89	-	-	-	-	$163	$161	-	-	-	-
Year 1	$98	$100	$0	$3	0%	0.911	$162	$158	$2	$7	1%	0.802
Year 2	$112	$113	$1	$3	1%	0.693	$181	$174	$6	$7	3%	0.386
Year 3	$126	$131	-$3	$5	-3%	0.482	$199	$197	$0	$9	0%	0.989
Years 1, 2, and 3 combined	$114	$117	-$1	$3	-1%	0.772	$179	$175	$2	$7	1%	0.738
Physician (primary care, specialist, and other noninstitutional providers)												
Baseline	$233	$227	-	-	-	-	$403	$394	-	-	-	-
Year 1	$255	$241	$9**	$4	4%	0.022	$399	$385	$6	$8	1%	0.453
Year 2	$267	$257	$4	$5	2%	0.327	$410	$402	-$1	$8	0%	0.878
Year 3	$280	$274	$1	$5	0%	0.828	$421	$412	$1	$8	0%	0.945
Years 1, 2, and 3 combined	$272	$263	$4	$3	2%	0.167	$410	$400	$2	$6	0%	0.811
Primary care physician												
Baseline	$36	$38	-	-	-	-	$64	$66	-	-	-	-
Year 1	$44	$47	$0	$1	-1%	0.777	$67	$71	-$2	$2	-3%	0.277
Year 2	$46	$52	-$4**	$2	-8%	0.029	$71	$75	-$3	$3	-3%	0.308
Year 3	$51	$55	-$1	$1	-3%	0.33	$78	$83	-$3	$2	-4%	0.198
Years 1, 2, and 3 combined	$45	$49	-$1	$1	-3%	0.169	$73	$77	-$3	$2	-3%	0.189
Specialist												
Baseline	$122	$116	-	-	-	-	$213	$204	-	-	-	-
Year 1	$147	$131	$10***	$3	8%	0.002	$213	$196	$8	$6	4%	0.194
Year 2	$150	$143	$2	$5	1%	0.706	$218	$204	$5	$7	2%	0.483
Year 3	$152	$140	$6	$5	4%	0.22	$216	$202	$4	$7	2%	0.529
Years 1, 2, and 3 combined	$142	$129	$7***	$2	5%	0.008	$216	$201	$6	$5	3%	0.265
Home health												
Baseline	$18	$25	-	-	-	-	$62	$75	-	-	-	-
Year 1	$24	$32	-$2	$1	-5%	0.234	$64	$79	-$2	$3	-3%	0.507
Year 2	$29	$37	-$2	$2	-5%	0.29	$71	$85	-$1	$4	-2%	0.755
Year 3	$31	$44	-$6***	$1	-17%	<.001	$72	$101	-$16***	$5	-18%	0.001
Years 1, 2, and 3 combined	$31	$41	-$4***	$1	-10%	0.005	$71	$91	-$7**	$3	-8%	0.049
Hospice												
Baseline	$0	$1	-	-	-	-	$7	$8	-	-	-	-
Year 1	$10	$13	-$2	$4	-14%	0.566	$26	$32	-$4	$8	-12%	0.633
Year 2	$13	$14	$0	$3	2%	0.942	$31	$28	$4	$5	15%	0.374
Year 3	$14	$17	-$1	$3	-8%	0.717	$33	$37	-$2	$8	-6%	0.77
Years 1, 2, and 3 combined	$14	$16	-$1	$3	-7%	0.747	$32	$34	-$1	$6	-2%	0.916

Table C.7. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
DME												
Baseline	$18	$21	-	-	-	-	$49	$54	-	-	-	-
Year 1	$18	$21	$0	$1	-1%	0.832	$40	$45	$0	$2	0%	0.927
Year 2	$16	$19	$0	$1	-2%	0.77	$32	$37	$0	$2	1%	0.808
Year 3	$18	$21	-$1	$1	-3%	0.598	$36	$41	$1	$3	2%	0.799
Years 1, 2, and 3 combined	$18	$21	$0	$1	-2%	0.64	$36	$40	$0	$2	1%	0.787
Utilization (annualized rate per 1,000 beneficiaries)												
Hospitalizations												
Baseline	231	211	-	-	-	-	549	504	-	-	-	-
Year 1	279	277	-18**	7	-6%	0.012	584	593	-54***	19	-8%	0.004
Year 2	288	288	-21***	7	-6%	0.003	578	571	-39**	20	-6%	0.05
Year 3	315	312	-17***	6	-5%	0.008	626	607	-26	20	-4%	0.178
Years 1, 2, and 3 combined	309	307	-20***	6	-6%	0.001	603	598	-40**	16	-6%	0.014
Total ED visits												
Baseline	539	527	-	-	-	-	1,116	1,082	-	-	-	-
Year 1	622	615	-6	14	-1%	0.681	1,184	1,149	1	38	0%	0.98
Year 2	668	644	11	13	2%	0.364	1,248	1,167	47	41	4%	0.254
Year 3	707	718	-24**	12	-3%	0.047	1,322	1,282	7	39	0%	0.869
Years 1, 2, and 3 combined	686	681	-8	10	-1%	0.447	1,251	1,200	17	35	1%	0.625
Outpatient ED visits												
Baseline	383	378	-	-	-	-	699	682	-	-	-	-
Year 1	415	403	8	14	2%	0.576	709	651	41	31	6%	0.182
Year 2	448	424	20*	11	5%	0.08	766	692	57*	32	8%	0.075
Year 3	464	472	-13	9	-3%	0.16	796	771	7	26	1%	0.786
Years 1, 2, and 3 combined	448	439	3	9	1%	0.704	749	697	34	26	5%	0.185
Outpatient ED visits that led to observation stays												
Baseline	28	30	-	-	-	-	59	65	-	-	-	-
Year 1	38	41	-1	3	-3%	0.655	71	72	6	6	9%	0.328
Year 2	50	47	5	4	11%	0.174	92	86	12	10	15%	0.202
Year 3	53	55	0	3	0%	0.966	100	99	7	8	7%	0.386
Years 1, 2, and 3 combined	49	50	1	3	3%	0.604	89	87	8	7	10%	0.221
Primary care visits												
Baseline	7,177	7,010	-	-	-	-	11,174	11,223	-	-	-	-
Year 1	7,596	7,557	-129	107	-2%	0.231	11,281	11,694	-364	228	-3%	0.111
Year 2	7,815	7,987	-339**	151	-4%	0.025	11,630	12,230	-551*	335	-4%	0.1
Year 3	8,070	8,416	-513***	184	-6%	0.005	12,054	13,093	-990***	375	-8%	0.008
Years 1, 2, and 3 combined	8,091	8,279	-359***	138	-4%	0.009	11,759	12,459	-648**	278	-5%	0.02

Table C.7. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Specialist visits												
Baseline	15,209	13,628	-	-	-	-	26,466	22,678	-	-	-	-
Year 1	15,987	14,119	287	201	2%	0.154	25,427	22,006	-367	350	-1%	0.295
Year 2	16,542	14,949	12	218	0%	0.954	25,277	22,305	-815**	382	-3%	0.033
Year 3	16,874	15,344	-50	202	0%	0.804	25,147	22,558	-1197***	426	-5%	0.005
Years 1, 2, and 3 combined	16,979	15,292	61	189	0%	0.746	25,382	22,377	-796**	327	-3%	0.015
Office-based primary care visits												
Baseline	4,111	4,095	-	-	-	-	5,783	5,573	-	-	-	-
Year 1	4,128	4,160	-48	68	-1%	0.478	5,421	5,225	-14	134	0%	0.915
Year 2	4,058	4,156	-115	83	-3%	0.163	5,183	5,149	-175	135	-3%	0.194
Year 3	4,084	4,193	-125	101	-3%	0.213	5,143	5,099	-165	171	-3%	0.334
Years 1, 2, and 3 combined	4,130	4,214	-100	79	-2%	0.203	5,236	5,144	-117	132	-2%	0.377
Total number of observations (treatment and comparison) across all years	487,368						135,749					

Source: Medicare claims data for the period October 2011 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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, 2, or 3 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. Expenditures on physician services includes expenditures on primary care physician services, specialist services, and services provided by other noninstitutional providers (the third category is not shown separately). For Medicare service use measures, observation stays are included in measures of outpatient ED visits and total ED visits. Primary care visits include office-based primary care visits as well as visits in other settings.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; DME= durable medical equipment; ED = emergency department; PBPM = per beneficiary per month; HCC = hierarchical condition category.

Table C.8. Regression-adjusted means and estimated difference-in-differences impact of CPC on selected quality-of-care process and outcome measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for New York

	All attributed Medicare beneficiaries						High-risk Attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Quality of care (percentage)												
Among patients with diabetes—HbA1c test												
Baseline	85.8	86.3	-	-		-	82.8	84.4	-	-		-
Year 1	86.5	82.5	4.5**	1.8		0.013	85.4	80.5	6.4**	2.8		0.022
Year 2	86.0	86.2	0.3	1.2		0.809	84.3	84.3	1.5	2.1		0.463
Year 3	85.7	83.0	3.2**	1.5		0.037	83.7	81.9	3.3	2.5		0.183
Among patients with diabetes—lipid test												
Baseline	90.0	89.4	-	-		-	87.6	86.2	-	-		-
Year 1	90.2	87.0	2.6**	1.2		0.039	88.9	85.2	2.3	1.6		0.153
Year 2	88.7	89.0	-0.9	1.2		0.427	87.0	87.5	-2.0	1.8		0.275
Year 3	88.0	85.4	2.0	1.5		0.185	84.5	84.9	-1.9	1.9		0.329
Among patients with diabetes—eye exam												
Baseline	59.1	63.1	-	-		-	59.9	66.2	-	-		-
Year 1	59.6	63.2	0.5	1.7		0.778	61.2	67.3	0.4	2.1		0.87
Year 2	60.5	63.0	1.5	1.5		0.294	61.6	63.9	4.1*	2.1		0.055
Year 3	61.9	64.4	1.5	2.4		0.515	61.8	69.7	-1.6	2.7		0.553
Among patients with diabetes—urine protein test												
Baseline	58.1	56.9	-	-		-	61.7	62.7	-	-		-
Year 1	60.2	57.6	1.4	2.0		0.485	63.9	58.6	6.3**	2.9		0.027
Year 2	63.0	59.3	2.5	2.5		0.32	63.9	61.2	3.7	2.9		0.207
Year 3	66.6	60.3	5.1	4.5		0.262	72.4	71.2	2.2	4.3		0.597
Among patients with ischemic vascular disease—lipid test												
Baseline	88.0	85.5	-	-		-	85.3	82.3	-	-		-
Year 1	88.7	84.2	2.0*	1.0		0.052	86.6	80.9	2.7*	1.6		0.089
Year 2	85.9	82.2	1.3	1.0		0.215	84.1	76.6	4.6***	1.7		0.009
Year 3	83.2	79.8	0.9	1.1		0.388	80.0	75.0	2.0	1.7		0.241

Table C.8. (*continued*)

	All attributed Medicare beneficiaries						High-risk Attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Among patients with diabetes—all four tests performed												
Baseline	34.8	35.4	-	-		-	35.8	39.0	-	-		-
Year 1	35.9	35.3	1.3	1.7		0.439	37.8	35.3	5.6***	2.2		0.01
Year 2	38.0	35.6	3.1	2.0		0.118	38.9	36.1	6.0*	3.1		0.054
Year 3	37.7	34.0	4.3	3.0		0.156	39.3	39.7	2.8	3.4		0.409
Among patients with diabetes—none of the four tests performed												
Baseline	3.8	3.4	-	-		-	4.3	4.0	-	-		-
Year 1	3.4	4.4	-1.4**	0.7		0.043	3.2	3.6	-0.6	1.1		0.549
Year 2	3.5	3.4	-0.2	0.6		0.695	3.6	3.5	-0.2	1.2		0.854
Year 3	2.4	2.9	-0.8*	0.5		0.075	2.5	1.5	0.8	0.7		0.299
Total number of observations (treatment and comparison) across all years: patients with diabetes	50,741						18,395					
Total number of observations (treatment and comparison) across all years: patients with ischemic vascular disease	60,454						31,080					
Continuity of care (percentage)												
Percentage of PCP visits at attributed practice												
Pre-intervention	81.5	79.9	-	-	-	-	78.5	76.1	-	-	-	-
Post-intervention	70.9	68.8	0.5	1.3	1%	0.676	69.5	66.9	0.1	1.3	0%	0.926
Percentage of all visits at attributed practice												
Pre-intervention	42.5	45.7	-	-	-	-	35.4	39.3	-	-	-	-
Post-intervention	35.1	38.4	-0.1	1.0	0%	0.904	30.9	34.7	0.0	0.9	0%	0.956
Bice-Boxerman Index based on PCP visits												
Pre-intervention	73.7	73.1	-	-	-	-	70.7	69.4	-	-	-	-
Post-intervention	66.5	65.3	0.6	1.4	1%	0.698	65.7	64.1	0.2	1.4	0%	0.871

Table C.8. (*continued*)

	All attributed Medicare beneficiaries						High-risk Attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Bice-Boxerman Index based on all visits												
Pre-intervention	31.3	33.2	-	-	-	-	25.6	27.9	-	-	-	-
Post-intervention	28.4	30.2	0.2	0.6	1%	0.806	25.2	27.4	0.0	0.6	0%	0.998
Total number of observations (treatment and comparison) across all years: measures based on PCP visits	145,818						47,586					
Total number of observations (treatment and comparison) across all years: measures based on all visits	166,566						53,196					
Transitional care and quality of care outcomes (annualized rate per 1,000 or percentage)												
Likelihood of 14-day follow-up visit (percentage)												
Baseline	68.4	69.4	-	-		-	72.8	74.2	-	-		-
Year 1	69.2	68.7	1.5	1.2		0.202	72.8	72.1	2.1	1.3		0.11
Year 2	70.6	71.8	-0.3	1.2		0.804	73.8	75.2	0.1	1.3		0.936
Year 3	72	72.8	0.1	1.3		0.944	75.6	77.3	-0.3	1.5		0.832
Years 1, 2, and 3 combined	70.9	71.5	0.4	1		0.728	73.9	74.7	0.6	1.1		0.573
Total number of observations (treatment and comparison) across all years: follow-up visit	116,317						65,464					
ACSC admissions (annualized rate per 1,000)												
Baseline	44	42	-	-	-	-	123	120	-	-	-	-
Year 1	62	64	-3	3	-4%	0.327	160	163	-5	9	-3%	0.549
Year 2	64	64	-1	3	-2%	0.709	158	153	2	10	1%	0.837
Year 3	71	75	-5*	3	-7%	0.093	172	170	-1	10	0%	0.945
Years 1, 2, and 3 combined	71	73	-4	3	-6%	0.178	167	166	-2	8	-1%	0.846
Total number of observations (treatment and comparison) across all years: ACSC admissions	487,368						135,749					

Table C.8. (*continued*)

	All attributed Medicare beneficiaries						High-risk Attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Likelihood of 30-day readmission (percentage)												
Baseline	14.6	13.9	-	-		-	17.5	16.9	-	-		-
Year 1	16.4	16.5	-0.8	1.0		0.412	20.3	20.5	-0.7	1.3		0.577
Year 2	16.2	15.5	0.1	1.1		0.95	19.8	18.0	1.2	1.5		0.421
Year 3	16.4	16.4	-0.6	1.0		0.527	20.2	19.4	0.2	1.5		0.894
Years 1, 2, and 3 combined	16.2	16.0	-0.5	1		0.623	19.9	19.1	0.2	1.2		0.863
Total number of observations (treatment and comparison) across all years: readmissions	116,317						65,464					
Likelihood of an ED revisit within 30 days of an outpatient ED visit (percentage)												
Baseline	4.2	4.0	-	-		-	9.2	8.4	-	-		-
Year 1	4.3	4.0	0.1	0.2		0.665	8.4	7.4	0.1	0.6		0.869
Year 2	4.6	4.1	0.3	0.3		0.295	8.7	7.6	0.3	0.7		0.642
Year 3	4.8	4.9	-0.2	0.3		0.499	8.7	8.7	-0.8	0.8		0.294
Years 1, 2, and 3 combined	4.7	4.5	0.1	0.3		0.804	8.5	7.9	-0.1	0.6		0.84
Total number of observations (treatment and comparison) across all years: ED revisit	487,368						135,704					

Source: Medicare claims data for the period October 2010 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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 postintervention period compared with the preintervention period relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. For ED revisit, we also control for chronic conditions at baseline. For the readmissions and follow-up visits equations that are estimated at the discharge level, we also control for discharge-level risk factors. Number of observations includes the total number of treatment and comparison group observations across all years. For continuous quality-of-care outcome measures, we present the absolute impact estimate as well as its relative size in percentage terms. For binary quality-of-care outcome measures, we present the absolute impact estimate in only percentage points.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; ACSC = ambulatory care sensitive condition; ED = emergency department; PCP = primary care physician; HCC = hierarchical condition category.

Table C.9. Regression-adjusted means and estimated difference-in-differences impact of CPC on expenditure and utilization measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Ohio/Kentucky

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total Medicare expenditures ($ PBPM)												
Without CPC care management fees												
Baseline	$572	$609	-	-	-	-	$1,328	$1,357	-	-	-	-
Year 1	$762	$771	$27*	$16	3%	0.093	$1,513	$1,465	$76**	$35	5%	0.032
Year 2	$809	$809	$36	$25	4%	0.149	$1,555	$1,475	$109**	$44	7%	0.014
Year 3	$873	$869	$40	$28	5%	0.153	$1,650	$1,577	$101**	$48	7%	0.036
Years 1, 2, and 3 combined	$853	$856	$34	$21	4%	0.104	$1,588	$1,523	$94***	$33	6%	0.005
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 1.05	*p*-val = 0.37					F = 2.80	*p*-val = 0.04				
With CPC care management fees												
Baseline	$572	$608	-	-	-	-	$1,328	$1,357	-	-	-	-
Year 1	$780	$771	$46***	$16	6%	0.004	$1,541	$1,465	$105***	$35	7%	0.003
Year 2	$827	$809	$54**	$25	7%	0.031	$1,585	$1,474	$139***	$44	9%	0.002
Year 3	$887	$869	$54*	$28	7%	0.055	$1,672	$1,577	$124**	$48	8%	0.01
Years 1, 2, and 3 combined	$870	$856	$51**	$21	6%	0.015	$1,615	$1,523	$121***	$33	8%	<.001
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 2.92	*p*-val = 0.03					F = 4.67	*p*-val = 0.00				
Expenditures by type of service ($ PBPM)												
Inpatient												
Baseline	$211	$228	-	-	-	-	$539	$550	-	-	-	-
Year 1	$306	$301	$22**	$11	7%	0.041	$637	$594	$54**	$23	9%	0.021
Year 2	$307	$300	$23	$16	8%	0.156	$618	$565	$65**	$27	12%	0.019
Year 3	$329	$321	$24	$17	8%	0.162	$652	$610	$54*	$31	9%	0.081
Years 1, 2, and 3 combined	$329	$322	$23*	$13	7%	0.081	$642	$597	$57***	$20	10%	0.004
Skilled nursing facility												
Baseline	$23	$23	-	-	-	-	$87	$86	-	-	-	-
Year 1	$55	$63	-$9**	$4	-11%	0.023	$140	$158	-$20*	$10	-12%	0.061
Year 2	$66	$67	-$2	$4	-2%	0.676	$158	$156	$1	$9	1%	0.912
Year 3	$76	$77	-$1	$4	-1%	0.774	$177	$181	-$5	$11	-3%	0.624
Years 1, 2, and 3 combined	$73	$77	-$4	$3	-5%	0.192	$163	$170	-$8	$7	-5%	0.262

Table C.9. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Outpatient												
Baseline	$102	$121	-	-	-	-	$193	$228	-	-	-	-
Year 1	$115	$132	$3	$4	2%	0.49	$197	$218	$14*	$8	7%	0.08
Year 2	$130	$147	$3	$6	2%	0.651	$220	$244	$11	$10	5%	0.243
Year 3	$137	$157	$0	$5	0%	0.955	$221	$247	$9	$9	4%	0.311
Years 1, 2, and 3 combined	$130	$148	$1	$4	1%	0.727	$212	$235	$11	$7	6%	0.113
Physician (primary care, specialist, and other noninstitutional providers)												
Baseline	$190	$193	-	-	-	-	$351	$346	-	-	-	-
Year 1	$215	$208	$9**	$4	4%	0.012	$358	$328	$26***	$8	8%	0.002
Year 2	$221	$214	$11**	$5	5%	0.035	$353	$324	$25***	$8	8%	0.003
Year 3	$234	$224	$13**	$5	6%	0.019	$370	$338	$27***	$10	8%	0.006
Years 1, 2, and 3 combined	$229	$221	$11**	$4	5%	0.013	$362	$331	$26***	$7	8%	<.001
Primary care physician												
Baseline	$33	$33	-	-	-	-	$60	$60	-	-	-	-
Year 1	$42	$43	-$2	$1	-4%	0.175	$66	$67	-$1	$2	-1%	0.714
Year 2	$43	$44	-$1	$1	-2%	0.31	$69	$66	$2	$2	3%	0.311
Year 3	$48	$48	$0	$1	0%	0.893	$76	$75	$1	$2	2%	0.524
Years 1, 2, and 3 combined	$43	$43	$0	$1	0%	0.961	$71	$70	$1	$1	1%	0.637
Specialist												
Baseline	$102	$104	-	-	-	-	$189	$184	-	-	-	-
Year 1	$123	$120	$5*	$3	4%	0.075	$191	$165	$21***	$7	12%	0.003
Year 2	$122	$117	$7**	$3	6%	0.015	$181	$155	$21***	$7	13%	0.003
Year 3	$122	$115	$9***	$3	8%	0.006	$182	$155	$22***	$8	14%	0.007
Years 1, 2, and 3 combined	$118	$110	$10***	$3	9%	0.004	$185	$159	$21***	$6	13%	0.001
Home health												
Baseline	$28	$24	-	-	-	-	$93	$78	-	-	-	-
Year 1	$37	$30	$4**	$2	9%	0.045	$96	$77	$4	$4	4%	0.37
Year 2	$46	$36	$6***	$2	13%	0.002	$111	$89	$8	$5	7%	0.112
Year 3	$51	$43	$5**	$2	10%	0.039	$122	$99	$7	$7	6%	0.292
Years 1, 2, and 3 combined	$49	$41	$5***	$2	11%	0.004	$112	$91	$6	$4	6%	0.178
Hospice												
Baseline	-$2	-$3	-	-	-	-	$9	$9	-	-	-	-
Year 1	$13	$15	-$3	$2	-13%	0.162	$40	$43	-$3	$5	-6%	0.57
Year 2	$21	$24	-$4	$3	-13%	0.164	$56	$60	-$4	$6	-6%	0.537
Year 3	$28	$27	$1	$2	2%	0.799	$71	$62	$9	$7	14%	0.187
Years 1, 2, and 3 combined	$24	$25	-$2	$2	-8%	0.281	$57	$57	$0	$5	0%	0.964

Table C.9. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
DME												
Baseline	$21	$23	-	-	-	-	$57	$61	-	-	-	-
Year 1	$20	$22	$0	$1	1%	0.922	$45	$46	$2	$2	5%	0.363
Year 2	$18	$20	$0	$2	-1%	0.926	$39	$38	$4	$3	11%	0.272
Year 3	$17	$20	-$1	$1	-5%	0.472	$36	$39	$1	$4	2%	0.892
Years 1, 2, and 3 combined	$19	$22	$0	$1	-2%	0.812	$40	$41	$2	$3	6%	0.405
Utilization (annualized rate per 1,000 beneficiaries)												
Hospitalizations												
Baseline	260	280	-	-	-	-	626	650	-	-	-	-
Year 1	321	326	15	10	4%	0.146	671	671	23	22	3%	0.29
Year 2	317	326	11	13	3%	0.418	646	637	33	28	5%	0.233
Year 3	343	348	15	16	5%	0.339	703	694	33	32	5%	0.303
Years 1, 2, and 3 combined	344	351	14	13	4%	0.271	684	678	30	23	5%	0.19
Total ED visits												
Baseline	618	619	-	-	-	-	1,282	1,233	-	-	-	-
Year 1	711	696	16	14	2%	0.262	1,338	1,295	-7	37	0%	0.85
Year 2	749	757	-8	15	-1%	0.587	1,392	1,360	-18	39	-1%	0.651
Year 3	789	814	-24	17	-3%	0.155	1,483	1,480	-47	35	-3%	0.18
Years 1, 2, and 3 combined	782	790	-7	13	-1%	0.594	1,420	1,395	-25	31	-2%	0.409
Outpatient ED visits												
Baseline	446	448	-	-	-	-	821	793	-	-	-	-
Year 1	482	472	12	12	2%	0.314	810	792	-11	27	-1%	0.687
Year 2	516	529	-11	13	-2%	0.403	876	878	-30	30	-3%	0.317
Year 3	530	561	-29**	14	-5%	0.042	912	931	-47*	27	-5%	0.081
Years 1, 2, and 3 combined	525	538	-11	11	-2%	0.318	871	873	-30	24	-3%	0.211
Outpatient ED visits that led to observation stays												
Baseline	39	51	-	-	-	-	82	104	-	-	-	-
Year 1	52	57	6**	3	13%	0.029	102	108	16**	7	19%	0.023
Year 2	70	78	3	3	5%	0.232	133	146	9	10	7%	0.4
Year 3	65	79	-3	5	-5%	0.531	118	149	-9	10	-7%	0.384
Years 1, 2, and 3 combined	65	75	2	3	3%	0.458	119	135	6	7	5%	0.4
Primary care visits												
Baseline	6,199	6,498	-	-	-	-	10,116	10,341	-	-	-	-
Year 1	6,855	7,091	63	98	1%	0.519	10,928	10,778	375*	227	3%	0.099
Year 2	7,145	7,278	166	116	2%	0.152	11,177	11,014	387	263	4%	0.141
Year 3	7,539	7,624	214	141	3%	0.13	11,851	11,745	330	278	3%	0.235
Years 1, 2, and 3 combined	7,446	7,602	153	110	2%	0.164	11,426	11,293	359	225	3%	0.112

Table C.9. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Specialist visits												
Baseline	12,368	12,887	-	-	-	-	21,969	22,651	-	-	-	-
Year 1	13,333	13,456	397	257	3%	0.123	21,861	21,319	1,224***	423	6%	0.004
Year 2	13,831	13,670	680**	302	5%	0.024	21,899	21,190	1,390***	420	7%	0.001
Year 3	14,147	14,012	654**	329	5%	0.047	22,108	21,498	1,292***	447	6%	0.004
Years 1, 2, and 3 combined	14,286	14,224	601**	289	4%	0.037	22,060	21,438	1,306***	381	6%	0.001
Office-based primary care visits												
Baseline	3,895	4,043	-	-	-	-	5,521	5,430	-	-	-	-
Year 1	3,948	4,111	-15	45	0%	0.738	5,278	5,216	-29	93	-1%	0.752
Year 2	3,889	4,062	-25	62	-1%	0.683	5,035	5,053	-109	100	-2%	0.277
Year 3	3,941	4,026	62	74	2%	0.401	5,043	4,972	-20	124	0%	0.871
Years 1, 2, and 3 combined	3,974	4,113	9	56	0%	0.865	5,119	5,079	-51	95	-1%	0.595
Total number of observations (treatment and comparison) across all years	638,563						174,555					

Source: Medicare claims data for the period October 2011 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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, 2, or 3 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. Expenditures on physician services includes expenditures on primary care physician services, specialist services, and services provided by other noninstitutional providers (the third category is not shown separately) For Medicare service use measures, observation stays are included in measures of outpatient ED visits and total ED visits. Primary care visits include office-based primary care visits as well as visits in other settings.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; DME= durable medical equipment; ED = emergency department; PBPM = per beneficiary per month; HCC = hierarchical condition category.

Table C.10. Regression-adjusted means and estimated difference-in-differences impact of CPC on selected quality-of-care process and outcome measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Ohio/Kentucky

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Quality of care (percentage)												
Among patients with diabetes—HbA1c test												
Baseline	89.4	84.7	-	-		-	86.5	81.6	-	-		-
Year 1	91.0	88.0	-1.6	1.1		0.165	89.6	84.6	0.1	1.5		0.957
Year 2	91.8	87.7	-0.5	1.5		0.723	90.7	86.3	-0.5	1.8		0.795
Year 3	90.9	87.8	-1.5	1.6		0.348	90.5	86.2	-0.5	2.2		0.803
Among patients with diabetes—lipid test												
Baseline	92.2	89.4	-	-		-	89.8	86.8	-	-		-
Year 1	92.1	90.5	-1.2	1.0		0.216	90.6	88.1	-0.4	1.3		0.734
Year 2	92.2	89.5	-0.1	1.3		0.939	90.4	87.3	0.1	1.6		0.94
Year 3	90.1	86.7	0.6	1.5		0.713	87.6	86.0	-1.3	2.6		0.613
Among patients with diabetes—eye exam												
Baseline	51.8	51.9	-	-		-	51.8	51.5	-	-		-
Year 1	54.3	52.9	1.5	1.3		0.268	54.7	51.7	2.7	2.5		0.272
Year 2	53.9	53.4	0.5	1.9		0.776	53.2	52.8	0.2	2.8		0.957
Year 3	61.3	60.9	0.5	2.9		0.873	60.7	59.1	1.3	3.6		0.711
Among patients with diabetes—urine protein test												
Baseline	65.0	64.3	-	-		-	68.6	68.5	-	-		-
Year 1	72.4	71.3	0.5	2.3		0.829	76.4	72.2	4.1	2.6		0.119
Year 2	75.3	70.4	4.3	3.3		0.191	77.8	73.9	3.7	2.7		0.161
Year 3	67.6	67.9	-0.9	3.6		0.805	78.3	77.7	0.5	4.4		0.907
Among patients with ischemic vascular disease—lipid test												
Baseline	82.9	80.7	-	-		-	79.0	76.4	-	-		-
Year 1	82.7	81.5	-1.1	1.2		0.369	80.1	75.9	1.7	2.2		0.441
Year 2	80.8	80.7	-2.1	1.4		0.129	77.9	76.8	-1.4	2.1		0.512
Year 3	78.9	77.9	-1.3	1.3		0.325	75.4	75.3	-2.5	3.1		0.427

Table C.10. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Among patients with diabetes—all four tests performed												
Baseline	34.8	33.9	-	-		-	34.9	33.9	-	-		-
Year 1	40.4	38.1	1.4	1.6		0.407	41.8	37.5	3.3	2.4		0.172
Year 2	41.1	37.4	2.8	2.8		0.313	40.6	37.2	2.4	3.3		0.472
Year 3	38.6	37.8	0.0	2.1		0.986	42.7	38.3	3.4	2.8		0.215
Among patients with diabetes—none of the four tests performed												
Baseline	3.4	4.6	-	-		-	3.7	4.9	-	-		-
Year 1	3.0	3.3	0.8	1.1		0.436	3.0	4.0	0.2	1.1		0.857
Year 2	2.7	3.8	0.0	0.8		0.995	2.7	4.2	-0.3	0.7		0.655
Year 3	1.9	2.3	0.8	1.3		0.523	1.7	1.6	1.3	1.3		0.285
Total number of observations (treatment and comparison) across all years: patients with diabetes	82,230						29,277					
Total number of observations (treatment and comparison) across all years: patients with ischemic vascular disease	79,296						41,075					
Continuity of care (percentage)												
Percentage of PCP visits at attributed practice												
Pre-intervention	85.8	81.4	-	-	-	-	82.7	76.4	-	-	-	-
Post-intervention	73.9	71.8	-2.4	1.6	-3%	0.138	72.1	67.5	-1.6	1.7	-2%	0.347
Percentage of all visits at attributed practice												
Pre-intervention	47.1	46.7	-	-	-	-	39.7	38.5	-	-	-	-
Post-intervention	39.3	39.9	-1.0	1.0	-2%	0.316	35.1	34.1	-0.1	1.1	0%	0.895
Bice-Boxerman Index based on PCP visits												
Pre-intervention	79.0	75.2	-	-	-	-	74.9	70.1	-	-	-	-
Post-intervention	70.2	70.1	-3.7**	1.6	-5%	0.02	68.1	66.8	-3.4**	1.6	-5%	0.039

Table C.10. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Bice-Boxerman Index based on all visits												
Pre-intervention	34.4	34.8	-	-	-	-	27.6	27.9	-	-	-	-
Post-intervention	30.8	32.5	-1.3*	0.7	-4%	0.072	26.8	27.7	-0.6	0.8	-2%	0.504
Total number of observations (treatment and comparison) across all years: measures based on PCP visits	202,498						65,432					
Total number of observations (treatment and comparison) across all years: measures based on all visits	228,670						72,206					
Transitional care and quality of care outcomes (annualized rate per 1,000 or percentage)												
Likelihood of 14-day follow-up visit (percentage)												
Baseline	61.9	61.1	-	-	-	-	66	65.2	-	-	-	-
Year 1	64.7	62.3	-1.3	1.3		0.307	68.8	68.4	-0.4	1.2		0.717
Year 2	68.1	67	0.4	1.7		0.81	71.8	69	1.9	1.7		0.267
Year 3	68.9	67.7	0.5	1.3		0.715	72.7	70.9	1	1.5		0.503
Years 1, 2, and 3 combined	67.7	67.1	-0.1	1.2		0.912	71.2	69.6	0.8	1.1		0.497
Total number of observations (treatment and comparison) across all years: follow-up visit	177,191						97,173					
ACSC admissions (annualized rate per 1,000)												
Baseline	52	52	-	-	-	-	150	151	-	-	-	-
Year 1	76	70	5*	3	6%	0.056	196	175	21**	9	12%	0.015
Year 2	73	73	0	3	0%	0.932	180	167	14	10	8%	0.157
Year 3	81	77	3	3	4%	0.22	192	178	14	9	8%	0.123
Years 1, 2, and 3 combined	83	80	3	2	3%	0.158	195	178	17**	8	8%	0.029
Total number of observations (treatment and comparison) across all years: ACSC admissions	638,563						174,555					

Table C.10. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Likelihood of 30-day readmission (percentage)												
Baseline	13.8	14.1	-	-		-	16.9	17.5	-	-		-
Year 1	15.5	16.9	-1.1	0.8		0.207	19.2	20.8	-0.9	1.1		0.434
Year 2	15.3	14.9	0.7	0.6		0.29	18.5	18.7	0.5	0.9		0.618
Year 3	15.4	16.0	-0.2	1.0		0.825	19.1	19.0	0.7	1.1		0.537
Years 1, 2, and 3 combined	15.6	16.1	-0.2	0.7		0.771	19.0	19.6	0.0	0.8		0.958
Total number of observations (treatment and comparison) across all years: readmissions	177,191						97,173					
Likelihood of an ED revisit within 30 days of an outpatient ED visit (percentage)												
Baseline	4.7	4.8	-	-		-	10.6	10.5	-	-		-
Year 1	4.8	4.4	0.5*	0.3		0.069	9.4	8.8	0.6	0.7		0.379
Year 2	5.0	4.8	0.4*	0.2		0.072	9.7	9.1	0.6	0.7		0.399
Year 3	5.4	5.5	0.1	0.2		0.765	10.8	9.8	0.9	0.7		0.172
Years 1, 2, and 3 combined	5.3	5.1	0.3	0.2		0.128	9.9	9.2	0.7	0.6		0.251
Total number of observations (treatment and comparison) across all years: ED revisit	638,563						174,499					

Source: Medicare claims data for the period October 2010 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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 postintervention period compared with the preintervention period relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. For ED revisit, we also control for chronic conditions at baseline. For the readmissions and follow-up visits equations that are estimated at the discharge level, we also control for discharge-level risk factors. Number of observations includes the total number of treatment and comparison group observations across all years. For continuous quality-of-care outcome measures, we present the absolute impact estimate as well as its relative size in percentage terms. For binary quality-of-care outcome measures, we present the absolute impact estimate in only percentage points.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; ACSC = ambulatory care sensitive condition; ED = emergency department; PCP = primary care physician; HCC = hierarchical condition category.

Table C.11. Regression-adjusted means and estimated difference-in-differences impact of CPC on expenditure and utilization measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Oklahoma

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total Medicare expenditures ($ PBPM)												
Without CPC care management fees												
Baseline	$581	$578	-	-	-	-	$1,394	$1,392	-	-	-	-
Year 1	$697	$748	-$54***	$12	-7%	<.001	$1,388	$1,523	-$137***	$35	-9%	<.001
Year 2	$773	$781	-$10	$17	-1%	0.533	$1,482	$1,511	-$31	$53	-2%	0.554
Year 3	$849	$856	-$9	$13	-1%	0.483	$1,585	$1,574	$9	$37	1%	0.808
Years 1, 2, and 3 combined	$808	$827	-$22**	$11	-3%	0.042	$1,498	$1,548	-$53	$34	-3%	0.124
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 8.63	*p*-val = 0.00					F = 6.67	*p*-val = 0.00				
With CPC care management fees												
Baseline	$580	$578	-	-	-	-	$1,394	$1,392	-	-	-	-
Year 1	$715	$748	-$36***	$12	-4%	0.002	$1,415	$1,524	-$111***	$35	-7%	0.002
Year 2	$790	$781	$6	$17	1%	0.705	$1,509	$1,511	-$5	$53	0%	0.923
Year 3	$862	$856	$3	$13	0%	0.81	$1,604	$1,574	$28	$37	2%	0.455
Years 1, 2, and 3 combined	$823	$827	-$7	$11	-1%	0.544	$1,522	$1,549	-$29	$34	-2%	0.401
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 4.95	*p*-val = 0.00					F = 5.14	*p*-val = 0.00				
Expenditures by type of service ($ PBPM)												
Inpatient												
Baseline	$202	$200	-	-	-	-	$528	$534	-	-	-	-
Year 1	$254	$285	-$34***	$8	-11%	<.001	$533	$621	-$81***	$25	-13%	0.001
Year 2	$283	$283	-$2	$10	-1%	0.855	$572	$575	$3	$34	1%	0.928
Year 3	$308	$308	-$2	$8	-1%	0.773	$607	$587	$26	$24	4%	0.289
Years 1, 2, and 3 combined	$294	$303	-$11*	$6	-4%	0.062	$574	$598	-$17	$22	-3%	0.422
Skilled nursing facility												
Baseline	$20	$16	-	-	-	-	$75	$68	-	-	-	-
Year 1	$35	$41	-$10***	$3	-18%	0.002	$93	$109	-$23***	$7	-19%	0.001
Year 2	$44	$43	-$3	$3	-6%	0.365	$107	$110	-$10	$9	-8%	0.267
Year 3	$55	$55	-$3	$4	-6%	0.357	$129	$130	-$8	$10	-6%	0.452
Years 1, 2, and 3 combined	$50	$51	-$5*	$3	-9%	0.086	$113	$120	-$14*	$7	-11%	0.069

Table C.11. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Outpatient												
Baseline	$109	$112	-	-	-	-	$212	$222	-	-	-	-
Year 1	$120	$125	-$2	$3	-2%	0.574	$195	$213	-$7	$8	-3%	0.365
Year 2	$139	$140	$2	$4	1%	0.678	$222	$240	-$7	$10	-3%	0.451
Year 3	$149	$151	$1	$4	1%	0.751	$238	$240	$8	$9	3%	0.412
Years 1, 2, and 3 combined	$139	$141	$1	$3	0%	0.84	$218	$230	-$2	$7	-1%	0.762
Physician (primary care, specialist, and other noninstitutional providers)												
Baseline	$171	$168	-	-	-	-	$322	$308	-	-	-	-
Year 1	$187	$186	-$2	$3	-1%	0.518	$310	$305	-$9	$8	-3%	0.211
Year 2	$197	$198	-$4	$3	-2%	0.249	$313	$310	-$11	$9	-3%	0.235
Year 3	$215	$214	-$3	$4	-1%	0.462	$333	$322	-$4	$8	-1%	0.661
Years 1, 2, and 3 combined	$204	$204	-$3	$3	-1%	0.331	$318	$312	-$8	$6	-2%	0.212
Primary care physician												
Baseline	$33	$31	-	-	-	-	$66	$60	-	-	-	-
Year 1	$41	$39	$0	$1	0%	0.959	$66	$62	-$2	$2	-3%	0.239
Year 2	$42	$41	-$2	$1	-4%	0.127	$67	$63	-$2	$2	-2%	0.467
Year 3	$48	$46	$0	$1	1%	0.788	$77	$70	$2	$2	2%	0.443
Years 1, 2, and 3 combined	$42	$40	$0	$1	-1%	0.603	$70	$65	-$1	$2	-1%	0.763
Specialist												
Baseline	$80	$79	-	-	-	-	$145	$137	-	-	-	-
Year 1	$94	$96	-$3	$3	-3%	0.282	$136	$136	-$7	$6	-5%	0.245
Year 2	$91	$95	-$5*	$3	-6%	0.051	$128	$135	-$15***	$5	-10%	0.006
Year 3	$93	$96	-$4	$2	-4%	0.101	$131	$130	-$6	$6	-5%	0.303
Years 1, 2, and 3 combined	$88	$89	-$3	$2	-3%	0.19	$132	$134	-$9**	$5	-7%	0.043
Home health												
Baseline	$50	$53	-	-	-	-	$169	$173	-	-	-	-
Year 1	$56	$63	-$4*	$2	-5%	0.063	$149	$162	-$9*	$4	-5%	0.055
Year 2	$60	$66	-$2	$3	-4%	0.338	$152	$162	-$7	$7	-4%	0.324
Year 3	$65	$72	-$4	$2	-5%	0.128	$153	$168	-$12	$7	-7%	0.111
Years 1, 2, and 3 combined	$66	$73	-$3	$2	-5%	0.1	$155	$168	-$9	$5	-5%	0.101
Hospice												
Baseline	$0	$1	-	-	-	-	$16	$15	-	-	-	-
Year 1	$18	$20	-$2	$2	-7%	0.328	$50	$55	-$6	$6	-10%	0.313
Year 2	$26	$27	-$1	$2	-2%	0.786	$66	$65	$0	$6	0%	0.992
Year 3	$32	$32	$1	$2	2%	0.834	$71	$73	-$2	$7	-3%	0.722
Years 1, 2, and 3 combined	$29	$30	-$1	$2	-2%	0.785	$66	$67	-$3	$5	-4%	0.586

Table C.11. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
DME												
Baseline	$28	$27	-	-	-	-	$73	$72	-	-	-	-
Year 1	$27	$27	-$1	$1	-4%	0.191	$59	$60	-$2	$3	-3%	0.503
Year 2	$24	$23	$0	$1	-1%	0.844	$50	$49	$1	$3	2%	0.75
Year 3	$26	$24	$1	$1	4%	0.361	$54	$53	$1	$3	1%	0.823
Years 1, 2, and 3 combined	$26	$25	$0	$1	0%	0.903	$54	$53	$0	$2	0%	0.963
Utilization (annualized rate per 1,000 beneficiaries)												
Hospitalizations												
Baseline	266	260	-	-	-	-	652	646	-	-	-	-
Year 1	313	326	-20***	7	-6%	0.004	658	700	-48**	21	-7%	0.027
Year 2	313	305	1	6	0%	0.817	631	621	4	29	1%	0.885
Year 3	345	338	0	8	0%	0.951	702	669	26	23	4%	0.253
Years 1, 2, and 3 combined	337	336	-5	6	-2%	0.348	669	669	-6	21	-1%	0.776
Total ED visits												
Baseline	621	649	-	-	-	-	1,331	1,408	-	-	-	-
Year 1	695	761	-38***	14	-5%	0.005	1,336	1,538	-126***	40	-9%	0.002
Year 2	747	783	-7	13	-1%	0.576	1,379	1,506	-50	47	-4%	0.29
Year 3	798	854	-28*	15	-3%	0.063	1,487	1,600	-36	52	-2%	0.485
Years 1, 2, and 3 combined	770	823	-24**	12	-3%	0.046	1,402	1,549	-70*	37	-5%	0.057
Outpatient ED visits												
Baseline	463	496	-	-	-	-	902	981	-	-	-	-
Year 1	491	555	-31***	11	-6%	0.006	860	1,041	-101***	30	-11%	0.001
Year 2	543	584	-8	12	-1%	0.506	925	1,057	-53	35	-5%	0.133
Year 3	563	625	-29**	15	-5%	0.046	966	1,102	-57	44	-6%	0.196
Years 1, 2, and 3 combined	543	599	-22**	11	-4%	0.045	912	1,060	-69**	29	-7%	0.016
Outpatient ED visits that led to observation stays												
Baseline	58	52	-	-	-	-	124	119	-	-	-	-
Year 1	61	58	-3	3	-5%	0.327	115	125	-15	10	-12%	0.129
Year 2	76	64	6**	3	8%	0.037	137	133	-2	9	-1%	0.851
Year 3	75	61	7**	3	11%	0.03	138	119	14	10	11%	0.149
Years 1, 2, and 3 combined	73	63	4	2	5%	0.146	130	125	-1	7	-1%	0.865
Primary care visits												
Baseline	6,534	6,488	-	-	-	-	10,999	10,718	-	-	-	-
Year 1	7,038	7,046	-54	130	-1%	0.68	11,011	10,819	-89	282	-1%	0.752
Year 2	7,275	7,078	151	170	2%	0.373	11,253	10,644	328	374	3%	0.381
Year 3	8,030	7,549	435**	203	6%	0.032	12,519	11,300	938**	403	8%	0.02
Years 1, 2, and 3 combined	7,684	7,435	202	161	3%	0.21	11,654	10,977	397	326	4%	0.223

Table C.11. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Specialist visits												
Baseline	9,869	10,305	-	-	-	-	17,392	18,188	-	-	-	-
Year 1	10,513	11,152	-203*	122	-2%	0.095	16,589	17,965	-580*	310	-3%	0.061
Year 2	11,055	11,478	13	139	0%	0.924	16,558	17,683	-330	328	-2%	0.315
Year 3	11,430	11,607	258*	155	2%	0.095	17,083	16,838	1040***	318	7%	0.001
Years 1, 2, and 3 combined	11,321	11,727	42	115	0%	0.713	16,788	17,556	30	264	0%	0.911
Office-based primary care visits												
Baseline	4,262	3,983	-	-	-	-	6,322	5,633	-	-	-	-
Year 1	4,348	4,049	19	67	0%	0.778	5,926	5,212	24	132	0%	0.853
Year 2	4,208	4,012	-83	100	-2%	0.407	5,496	5,080	-273	192	-5%	0.156
Year 3	4,259	4,188	-209**	104	-5%	0.044	5,482	5,208	-415**	195	-7%	0.033
Years 1, 2, and 3 combined	4,309	4,126	-99	85	-2%	0.24	5,612	5,146	-220	161	-4%	0.171
Total number of observations (treatment and comparison) across all years	734,090						190,437					

Source: Medicare claims data for the period October 2011 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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, 2, or 3 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. Expenditures on physician services includes expenditures on primary care physician services, specialist services, and services provided by other noninstitutional providers (the third category is not shown separately) For Medicare service use measures, observation stays are included in measures of outpatient ED visits and total ED visits. Primary care visits include office-based primary care visits as well as visits in other settings.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; DME= durable medical equipment; ED = emergency department; PBPM = per beneficiary per month; HCC = hierarchical condition category.

Table C.12. Regression-adjusted means and estimated difference-in-differences impact of CPC on selected quality-of-care process and outcome measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Oklahoma

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Quality of care (percentage)												
Among patients with diabetes—HbA1c test												
Baseline	58.4	68.7	-	-		-	55.4	66.2	-	-		-
Year 1	58.3	70.5	-2.0	1.5		0.173	55.3	68.3	-2.1	1.7		0.225
Year 2	61.1	68.6	2.8	1.7		0.108	57.3	68.4	-0.2	1.8		0.892
Year 3	59.7	67.0	2.8	2.0		0.147	58.5	66.5	2.8	2.1		0.194
Among patients with diabetes—lipid test												
Baseline	69.7	73.1	-	-		-	66.1	70.0	-	-		-
Year 1	71.2	75.9	-1.3	1.1		0.244	67.3	74.2	-2.9	1.9		0.121
Year 2	70.2	73.9	-0.2	1.1		0.837	66.3	73.7	-3.5**	1.7		0.038
Year 3	67.9	70.9	0.5	1.6		0.781	63.8	68.1	-0.3	2.2		0.876
Among patients with diabetes—eye exam												
Baseline	51.8	51.2	-	-		-	50.5	49.7	-	-		-
Year 1	53.6	56.5	-3.5*	2.0		0.075	52.5	54.9	-3.3	2.4		0.166
Year 2	54.4	52.6	1.2	1.5		0.442	54.6	52.3	1.5	2.0		0.466
Year 3	54.1	53.7	-0.2	1.4		0.892	53.1	51.6	0.7	2.0		0.736
Among patients with diabetes—urine protein test												
Baseline	51.1	50.3	-	-		-	58.3	57.6	-	-		-
Year 1	53.7	55.2	-2.3	2.2		0.297	60.3	59.0	0.6	2.5		0.82
Year 2	55.7	56.9	-2.0	2.2		0.347	61.4	62.1	-1.4	2.3		0.557
Year 3	61.8	62.8	-1.8	3.3		0.577	72.8	76.3	-4.2	2.7		0.124
Among patients with ischemic vascular disease—lipid test												
Baseline	70.4	73.5	-	-		-	66.7	70.6	-	-		-
Year 1	70.9	72.2	1.7	1.2		0.152	67.2	70.5	0.7	1.5		0.662
Year 2	68.3	70.6	0.8	1.2		0.521	64.3	69.8	-1.5	1.8		0.396
Year 3	65.0	66.7	1.4	1.5		0.362	61.7	63.2	2.4	2.2		0.267

Table C.12. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Among patients with diabetes—all four tests performed												
Baseline	20.9	23.1	-	-		-	20.5	22.9	-	-		-
Year 1	21.1	29.2	-5.8***	2.1		0.005	21.2	28.7	-5.0**	2.1		0.019
Year 2	22.9	25.9	-0.8	1.5		0.589	22.0	26.1	-1.6	1.7		0.347
Year 3	21.5	23.5	0.2	1.8		0.913	23.4	26.3	-0.4	1.9		0.827
Among patients with diabetes—none of the four tests performed												
Baseline	10.7	9.8	-	-		-	10.2	8.5	-	-		-
Year 1	9.2	7.3	1.0	0.9		0.243	8.7	7.2	-0.2	1.2		0.866
Year 2	9.0	8.0	0.0	0.8		0.958	8.5	6.8	-0.1	0.9		0.953
Year 3	6.9	5.7	0.3	0.7		0.621	5.5	3.4	0.4	1.1		0.742
Total number of observations (treatment and comparison) across all years: patients with diabetes	101,157						35,713					
Total number of observations (treatment and comparison) across all years: patients with ischemic vascular disease	100,309						47,547					
Continuity of care (percentage)												
Percentage of PCP visits at attributed practice												
Pre-intervention	79.2	75.6	-	-	-	-	73.7	71.3	-	-	-	-
Post-intervention	61.4	60.5	-2.7	1.8	-4%	0.124	57.8	58.2	-2.8	1.9	-5%	0.138
Percentage of all visits at attributed practice												
Pre-intervention	49.7	46.6	-	-	-	-	42.6	39.7	-	-	-	-
Post-intervention	37.2	36.5	-2.3*	1.2	-6%	0.058	33.5	32.7	-2.1	1.4	-6%	0.12
Bice-Boxerman Index based on PCP visits												
Pre-intervention	70.4	67.3	-	-	-	-	64.7	62.9	-	-	-	-
Post-intervention	61.3	61.0	-2.8*	1.5	-4%	0.068	58.8	59.3	-2.3	1.5	-4%	0.14

Table C.12. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Bice-Boxerman Index based on all visits												
Pre-intervention	35.9	33.8	-	-	-	-	29.8	28.3	-	-	-	-
Post-intervention	31.8	31.4	-1.8**	0.8	-5%	0.023	28.9	28.7	-1.4*	0.8	-4%	0.088
Total number of observations (treatment and comparison) across all years: measures based on PCP visits	216,642						64,810					
Total number of observations (treatment and comparison) across all years: measures based on all visits	243,366						71,974					
Transitional care and quality of care outcomes (annualized rate per 1,000 or percentage)												
Likelihood of 14-day follow-up visit (percentage)												
Baseline	59.3	57.8	-	-		-	63.6	61.8	-	-		-
Year 1	60.3	58.1	0.7	1.1		0.524	64.2	62.3	0.1	1.3		0.918
Year 2	62.9	58.7	2.7**	1.2		0.030	65.7	63.3	0.6	1.5		0.686
Year 3	61.7	60.2	-0.0	1.0		0.973	65.1	63.4	-0.1	1.6		0.959
Years 1, 2, and 3 combined	61.8	59.2	1.1	0.9		0.248	65.0	63.0	0.2	1.2		0.848
Total number of observations (treatment and comparison) across all years: follow-up visit	190,900						99,450					
ACSC admissions (annualized rate per 1,000)												
Baseline	55	53	-	-	-	-	161	156	-	-	-	-
Year 1	74	76	-3	3	-4%	0.333	190	195	-9	11	-4%	0.426
Year 2	76	72	3	3	4%	0.331	180	176	-1	9	-1%	0.913
Year 3	86	82	3	4	3%	0.46	206	196	5	13	3%	0.674
Years 1, 2, and 3 combined	84	81	1	3	1%	0.728	196	192	-2	9	-1%	0.865
Total number of observations (treatment and comparison) across all years: ACSC admissions	734,090						190,437					

Table C.12. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Likelihood of 30-day readmission (percentage)												
Baseline	13.9	13.6	-	-		-	17.4	17.3	-	-		-
Year 1	15.6	16.4	-1.1	0.8		0.165	19.4	21.8	-2.6**	1.1		0.02
Year 2	15.1	14.8	0.0	0.8		0.988	18.8	18.8	-0.1	1.4		0.933
Year 3	15.7	15.8	-0.3	0.7		0.62	19.6	19.5	-0.1	1.0		0.936
Years 1, 2, and 3 combined	15.3	15.5	-0.5	0.6		0.42	18.9	19.7	-1.0	0.8		0.241
Total number of observations (treatment and comparison) across all years: readmissions	190,900						99,450					
Likelihood of an ED revisit within 30 days of an outpatient ED visit (percentage)												
Baseline	4.9	5.1	-	-		-	11.2	11.8	-	-		-
Year 1	4.6	5.4	-0.6**	0.3		0.031	9.3	11.1	-1.3**	0.6		0.04
Year 2	5.2	5.8	-0.3	0.2		0.102	9.7	11.6	-1.3**	0.6		0.027
Year 3	5.7	6.7	-0.8***	0.3		0.005	10.5	11.9	-0.8	0.7		0.275
Years 1, 2, and 3 combined	5.4	6.2	-0.6**	0.2		0.013	9.8	11.4	-1.1**	0.6		0.048
Total number of observations (treatment and comparison) across all years: ED revisit	734,090						190,437					

Source: Medicare claims data for the period October 2010 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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 postintervention period compared with the preintervention period relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. For ED revisit, we also control for chronic conditions at baseline. For the readmissions and follow-up visits equations that are estimated at the discharge level, we also control for discharge-level risk factors. Number of observations includes the total number of treatment and comparison group observations across all years. For continuous quality-of-care outcome measures, we present the absolute impact estimate as well as its relative size in percentage terms. For binary quality-of-care outcome measures, we present the absolute impact estimate in only percentage points.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; ACSC = ambulatory care sensitive condition; ED = emergency department; PCP = primary care physician; HCC = hierarchical condition category.

Table C.13. Regression-adjusted means and estimated difference-in-differences impact of CPC on expenditure and utilization measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Oregon

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Total Medicare expenditures ($ PBPM)												
Without CPC care management fees												
Baseline	$544	$532	-	-	-	-	$1,262	$1,243	-	-	-	-
Year 1	$647	$654	-$19	$14	-3%	0.165	$1,263	$1,255	-$11	$40	-1%	0.782
Year 2	$711	$725	-$27*	$14	-3%	0.054	$1,358	$1,337	$2	$50	0%	0.971
Year 3	$763	$761	-$9	$15	-1%	0.537	$1,444	$1,416	$9	$46	1%	0.837
Years 1, 2, and 3 combined	$739	$746	-$19	$11	-2%	0.101	$1,365	$1,346	-$1	$38	0%	0.974
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 1.37	*p*-val = 0.25					F = 0.08	*p*-val = 0.97				
With CPC care management fees												
Baseline	$543	$532	-	-	-	-	$1,263	$1,244	-	-	-	-
Year 1	$665	$653	$0	$14	0%	0.993	$1,291	$1,255	$17	$40	1%	0.681
Year 2	$728	$725	-$9	$14	-1%	0.522	$1,387	$1,338	$30	$50	2%	0.543
Year 3	$777	$761	$4	$15	1%	0.8	$1,465	$1,416	$30	$46	2%	0.507
Years 1, 2, and 3 combined	$756	$746	-$2	$11	0%	0.846	$1,391	$1,346	$25	$38	2%	0.517
Test whether Year 1, 2, and 3 impacts are jointly significant	F = 0.28	*p*-val = 0.84					F = 0.17	*p*-val = 0.91				
Expenditures by type of service ($ PBPM)												
Inpatient												
Baseline	$193	$185	-	-	-	-	$495	$479	-	-	-	-
Year 1	$238	$242	-$12	$9	-5%	0.167	$481	$496	-$32	$25	-6%	0.211
Year 2	$260	$261	-$9	$10	-3%	0.344	$521	$495	$9	$31	2%	0.774
Year 3	$270	$273	-$11	$8	-4%	0.162	$541	$544	-$20	$28	-4%	0.471
Years 1, 2, and 3 combined	$268	$271	-$11*	$7	-4%	0.098	$517	$514	-$15	$23	-3%	0.523
Skilled nursing facility												
Baseline	$25	$26	-	-	-	-	$88	$92	-	-	-	-
Year 1	$42	$42	$0	$3	0%	0.94	$111	$109	$7	$8	6%	0.393
Year 2	$45	$53	-$6***	$2	-11%	0.007	$113	$132	-$16*	$8	-12%	0.069
Year 3	$53	$55	-$2	$3	-4%	0.564	$132	$139	-$3	$9	-2%	0.787
Years 1, 2, and 3 combined	$52	$56	-$3	$2	-5%	0.149	$122	$130	-$4	$6	-3%	0.503

Table C.13. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Outpatient												
Baseline	$112	$103	-	-	-	-	$224	$205	-	-	-	-
Year 1	$123	$118	-$3	$4	-2%	0.367	$215	$198	-$2	$9	-1%	0.794
Year 2	$140	$140	-$10**	$4	-6%	0.024	$236	$223	-$6	$9	-3%	0.497
Year 3	$152	$150	-$7	$4	-5%	0.104	$253	$234	$0	$11	0%	0.998
Years 1, 2, and 3 combined	$142	$140	-$7**	$4	-5%	0.047	$233	$217	-$3	$8	-1%	0.698
Physician (primary care, specialist, and other noninstitutional providers)												
Baseline	$174	$175	-	-	-	-	$318	$324	-	-	-	-
Year 1	$179	$187	-$6	$5	-3%	0.167	$285	$291	$0	$11	0%	0.974
Year 2	$193	$198	-$4	$5	-2%	0.489	$307	$301	$11	$13	4%	0.38
Year 3	$205	$206	$1	$6	0%	0.91	$317	$310	$12	$14	4%	0.384
Years 1, 2, and 3 combined	$197	$201	-$3	$5	-2%	0.538	$303	$301	$7	$11	2%	0.486
Primary care physician												
Baseline	$30	$31	-	-	-	-	$56	$57	-	-	-	-
Year 1	$35	$38	-$3***	$1	-8%	0.004	$52	$58	-$5***	$2	-8%	0.003
Year 2	$36	$39	-$2*	$1	-6%	0.086	$56	$57	$0	$2	0%	0.963
Year 3	$40	$40	$1	$1	2%	0.625	$61	$61	$1	$2	2%	0.569
Years 1, 2, and 3 combined	$35	$37	-$1	$1	-2%	0.424	$57	$59	-$1	$2	-2%	0.485
Specialist												
Baseline	$85	$83	-	-	-	-	$161	$161	-	-	-	-
Year 1	$93	$97	-$7*	$4	-7%	0.072	$135	$138	-$3	$11	-2%	0.785
Year 2	$97	$101	-$7*	$4	-7%	0.052	$142	$146	-$5	$10	-3%	0.628
Year 3	$101	$101	-$2	$4	-2%	0.571	$146	$147	-$1	$12	0%	0.956
Years 1, 2, and 3 combined	$92	$94	-$4	$4	-4%	0.248	$141	$144	-$3	$10	-2%	0.772
Home health												
Baseline	$16	$17	-	-	-	-	$59	$61	-	-	-	-
Year 1	$23	$24	$1	$1	3%	0.537	$65	$65	$3	$4	4%	0.437
Year 2	$28	$28	$1	$1	3%	0.411	$73	$71	$4	$4	6%	0.245
Year 3	$31	$31	$1	$2	4%	0.458	$78	$75	$5	$5	7%	0.27
Years 1, 2, and 3 combined	$30	$30	$1	$1	3%	0.362	$74	$72	$4	$3	6%	0.21
Hospice												
Baseline	-$1	$3	-	-	-	-	$13	$21	-	-	-	-
Year 1	$18	$21	$1	$2	6%	0.451	$50	$50	$9*	$5	18%	0.077
Year 2	$25	$26	$2	$2	8%	0.415	$63	$74	-$2	$9	-3%	0.822
Year 3	$32	$26	$10***	$3	44%	<.001	$77	$71	$15*	$8	24%	0.056
Years 1, 2, and 3 combined	$28	$27	$5**	$2	19%	0.018	$66	$68	$7	$6	12%	0.244

Table C.13. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
DME												
Baseline	$24	$22	-	-	-	-	$65	$61	-	-	-	-
Year 1	$23	$21	$1	$1	3%	0.516	$55	$46	$5*	$3	11%	0.075
Year 2	$20	$19	$0	$1	-2%	0.655	$46	$41	$1	$3	2%	0.689
Year 3	$21	$21	$0	$1	-2%	0.721	$47	$43	$0	$3	0%	0.985
Years 1, 2, and 3 combined	$22	$21	$0	$1	0%	0.882	$49	$43	$2	$2	5%	0.353
Utilization (annualized rate per 1,000 beneficiaries)												
Hospitalizations												
Baseline	203	193	-	-	-	-	496	474	-	-	-	-
Year 1	234	238	-13*	7	-5%	0.056	500	504	-26	19	-5%	0.168
Year 2	239	240	-11	8	-4%	0.18	496	481	-7	28	-1%	0.8
Year 3	256	250	-4	8	-2%	0.64	537	516	0	27	0%	0.989
Years 1, 2, and 3 combined	255	254	-10	7	-4%	0.151	517	506	-12	21	-2%	0.575
Total ED visits												
Baseline	562	546	-	-	-	-	1,242	1,203	-	-	-	-
Year 1	609	619	-26	18	-4%	0.144	1,229	1,220	-30	47	-2%	0.52
Year 2	655	673	-33*	20	-5%	0.093	1,288	1,268	-19	59	-1%	0.746
Year 3	707	717	-25	20	-3%	0.215	1,391	1,328	24	66	2%	0.72
Years 1, 2, and 3 combined	686	700	-30*	17	-4%	0.083	1,310	1,281	-10	50	-1%	0.845
Outpatient ED visits												
Baseline	446	436	-	-	-	-	913	887	-	-	-	-
Year 1	464	473	-19	14	-4%	0.197	879	867	-14	37	-2%	0.696
Year 2	504	523	-29*	16	-5%	0.07	939	924	-11	46	-1%	0.803
Year 3	536	549	-24	18	-4%	0.188	990	939	25	58	3%	0.664
Years 1, 2, and 3 combined	519	533	-25*	14	-5%	0.079	937	912	-1	41	0%	0.979
Outpatient ED visits that led to observation stays												
Baseline	39	36	-	-	-	-	94	81	-	-	-	-
Year 1	43	38	2	2	5%	0.337	93	76	5	8	5%	0.583
Year 2	53	47	3	4	6%	0.413	107	86	8	13	8%	0.545
Year 3	49	46	0	3	-1%	0.903	97	87	-3	13	-3%	0.817
Years 1, 2, and 3 combined	51	46	2	3	3%	0.56	101	84	3	11	4%	0.747
Primary care visits												
Baseline	6,089	6,890	-	-	-	-	10,148	11,386	-	-	-	-
Year 1	6,241	7,232	-190	132	-3%	0.152	9,588	11,284	-457*	267	-4%	0.087
Year 2	6,453	7,291	-37	163	-1%	0.821	9,869	10,999	109	362	1%	0.764
Year 3	6,696	7,414	83	172	1%	0.629	10,316	11,241	314	323	3%	0.331
Years 1, 2, and 3 combined	6,689	7,554	-40	146	-1%	0.784	10,009	11,275	-18	291	0%	0.951

Table C.13. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Specialist visits												
Baseline	9,754	9,640	-	-	-	-	17,275	17,439	-	-	-	-
Year 1	10,046	10,124	-193	164	-2%	0.24	15,857	15,956	66	359	0%	0.854
Year 2	10,536	10,638	-216	158	-2%	0.171	16,132	15,983	313	428	2%	0.465
Year 3	10,728	10,675	-61	172	-1%	0.723	16,084	15,684	564	357	4%	0.114
Years 1, 2, and 3 combined	10,773	10,814	-160	154	-1%	0.299	16,062	15,916	313	338	2%	0.354
Office-based primary care visits												
Baseline	3,892	4,089	-	-	-	-	6,117	6,549	-	-	-	-
Year 1	3,988	4,228	-44	77	-1%	0.567	5,824	6,361	-105	137	-2%	0.444
Year 2	4,061	4,142	116	102	3%	0.259	5,860	6,034	258	189	5%	0.172
Year 3	4,160	4,247	109	110	3%	0.324	5,879	5,998	314	199	6%	0.114
Years 1, 2, and 3 combined	4,165	4,298	67	92	2%	0.464	5,870	6,149	156	160	3%	0.33
Total number of observations (treatment and comparison) across all years	851,241						213,145					

Source: Medicare claims data for the period October 2011 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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, 2, or 3 compared with baseline relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. Expenditures on physician services includes expenditures on primary care physician services, specialist services, and services provided by other noninstitutional providers (the third category is not shown separately) For Medicare service use measures, observation stays are included in measures of outpatient ED visits and total ED visits. Primary care visits include office-based primary care visits as well as visits in other settings.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; DME= durable medical equipment; ED = emergency department; PBPM = per beneficiary per month; HCC = hierarchical condition category.

Table C.14. Regression-adjusted means and estimated difference-in-differences impact of CPC on selected quality-of-care process and outcome measures during the first three years of CPC for attributed Medicare FFS beneficiaries: yearly estimates for Oregon

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Quality of care (percentage)												
Among patients with diabetes—HbA1c test												
Baseline	84.0	82.2	-	-		-	82.7	77.8	-	-		-
Year 1	86.8	81.8	3.2*	1.7		0.055	85.7	78.8	2.0	1.8		0.254
Year 2	86.1	84.2	0.1	1.9		0.961	85.6	80.6	0.1	2.4		0.965
Year 3	83.8	83.0	-1.0	2.0		0.627	83.0	81.2	-3.1	2.4		0.184
Among patients with diabetes—lipid test												
Baseline	85.8	86.4	-	-		-	82.4	84.1	-	-		-
Year 1	87.0	85.9	1.8*	1.1		0.089	85.0	83.8	2.9	1.8		0.104
Year 2	87.1	85.6	2.2	1.7		0.195	84.6	80.8	5.5**	2.5		0.026
Year 3	82.2	85.3	-2.4	1.6		0.123	79.6	82.2	-0.9	2.1		0.661
Among patients with diabetes—eye exam												
Baseline	53.8	53.1	-	-		-	53.2	54.1	-	-		-
Year 1	57.2	53.5	3.0	2.2		0.173	57.8	53.0	5.8**	2.9		0.049
Year 2	58.6	56.1	1.8	1.7		0.279	58.1	56.3	2.7	3.0		0.362
Year 3	60.3	57.4	2.3	2.4		0.347	60.6	57.7	3.9	2.9		0.176
Among patients with diabetes—urine protein test												
Baseline	62.0	68.2	-	-		-	67.1	72.2	-	-		-
Year 1	66.3	70.9	1.6	1.8		0.37	69.0	74.8	-0.7	2.5		0.783
Year 2	71.8	73.9	4.1**	2.0		0.045	74.8	74.5	5.4**	2.5		0.029
Year 3	59.7	59.4	6.5**	3.3		0.047	72.8	69.0	8.9***	3.0		0.003
Among patients with ischemic vascular disease—lipid test												
Baseline	81.1	81.1	-	-		-	76.6	76.4	-	-		-
Year 1	80.1	81.5	-1.5	2.5		0.547	76.5	77.3	-0.9	3.0		0.759
Year 2	77.1	77.1	0.0	2.2		0.987	72.9	74.6	-1.9	2.9		0.515
Year 3	71.8	72.9	-1.1	2.0		0.586	68.5	68.3	0.1	3.0		0.978

Table C.14. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Among patients with diabetes—all four tests performed												
Baseline	31.9	35.0	-	-		-	33.3	37.6	-	-		-
Year 1	36.8	37.0	2.9	2.0		0.14	38.4	37.9	4.8	2.9		0.105
Year 2	39.5	40.4	2.3	1.8		0.194	39.4	40.0	3.7	2.4		0.117
Year 3	29.4	29.9	2.6	2.5		0.305	35.2	36.7	2.7	3.4		0.432
Among patients with diabetes—none of the four tests performed												
Baseline	5.1	5.1	-	-		-	5.4	5.6	-	-		-
Year 1	4.3	6.0	-1.8**	0.8		0.025	4.4	6.2	-1.6*	0.9		0.066
Year 2	3.6	4.8	-1.2**	0.6		0.047	3.7	5.5	-1.6	1.1		0.13
Year 3	2.9	3.7	-0.9	1.0		0.331	2.6	4.6	-1.8	1.4		0.2
Total number of observations (treatment and comparison) across all years: patients with diabetes	94,326						32,575					
Total number of observations (treatment and comparison) across all years: patients with ischemic vascular disease	75,839						37,138					
Continuity of care (percentage)												
Percentage of PCP visits at attributed practice												
Pre-intervention	77.7	75.5	-	-	-	-	74.7	71.6	-	-	-	-
Post-intervention	61.0	60.2	-1.3	2.8	-2%	0.63	59.4	57.4	-1.1	3.5	-2%	0.748
Percentage of all visits at attributed practice												
Pre-intervention	46.4	48.0	-	-	-	-	41.8	43.2	-	-	-	-
Post-intervention	35.6	36.6	0.5	2.0	2%	0.781	34.0	35.0	0.5	2.4	2%	0.829
Bice-Boxerman Index based on PCP visits												
Pre-intervention	67.6	65.9	-	-	-	-	64.6	61.9	-	-	-	-
Post-intervention	57.7	57.6	-1.6	1.6	-3%	0.318	56.8	57.0	-2.8*	1.5	-5%	0.07

Table C.14. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Bice-Boxerman Index based on all visits												
Pre-intervention	34.3	35.4	-	-	-	-	30.2	31.0	-	-	-	-
Post-intervention	30.1	30.9	0.4	1.0	1%	0.726	28.9	29.9	-0.1	1.1	0%	0.93
Total number of observations (treatment and comparison) across all years: measures based on PCP visits	220,330						68,720					
Total number of observations (treatment and comparison) across all years: measures based on all visits	268,654						81,084					
Transitional care and quality of care outcomes (annualized rate per 1,000 or percentage)												
Likelihood of 14-day follow-up visit (percentage)												
Baseline	59.6	62.6	-	-		-	64.4	68.8	-	-		-
Year 1	59.7	61.0	1.7	1.3		0.193	64.4	66.4	2.3*	1.4		0.093
Year 2	60.6	63.4	0.2	1.4		0.901	65.0	67.2	2.1	1.4		0.137
Year 3	62.4	63.6	1.9	1.4		0.172	66.9	65.7	5.6***	1.8		0.002
Years 1, 2, and 3 combined	61.0	62.7	1.3	1.1		0.238	65.4	66.4	3.4***	1.2		0.006
Total number of observations (treatment and comparison) across all years: follow-up visit	180,044						92,271					
ACSC admissions (annualized rate per 1,000)												
Baseline	34	35	-	-	-	-	103	103	-	-	-	-
Year 1	48	47	1	3	1%	0.767	126	130	-4	9	-3%	0.644
Year 2	49	47	2	3	4%	0.533	127	122	5	12	4%	0.674
Year 3	53	52	1	3	1%	0.802	135	137	-2	13	-2%	0.868
Years 1, 2, and 3 combined	54	53	1	3	2%	0.649	133	133	0	10	0%	0.972
Total number of observations (treatment and comparison) across all years: ACSC admissions	851,241						213,145					

Table C.14. (*continued*)

	All attributed Medicare beneficiaries						High-risk attributed Medicare beneficiaries					
	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact	CPC practices' predicted mean	Comparison group practices' predicted mean	Estimated impact (size)	Standard error for impact estimate	Estimated impact (percentage)	*p*-value for estimated impact
Likelihood of 30-day readmission (percentage)												
Baseline	12.8	13.1	-	-		-	15.6	16.6	-	-		-
Year 1	13.0	13.3	-0.1	1.0		0.933	16.5	16.6	0.9	1.4		0.525
Year 2	12.8	14.1	-1.0	1.0		0.354	15.7	17.2	-0.5	1.6		0.774
Year 3	13.8	13.4	0.7	1.0		0.483	17.2	16.1	2.1	1.6		0.186
Years 1, 2, and 3 combined	13.1	13.5	-0.1	0.9		0.933	16.2	16.4	0.8	1.3		0.511
Total number of observations (treatment and comparison) across all years: readmissions	180,044						92,271					
Likelihood of an ED revisit within 30 days of an outpatient ED visit (percentage)												
Baseline	4.7	4.5	-	-		-	11.5	10.6	-	-		-
Year 1	4.6	4.6	-0.3	0.3		0.305	9.7	9.6	-0.8	0.7		0.296
Year 2	5.0	5.3	-0.5**	0.2		0.037	10.5	10.6	-1.0	0.6		0.108
Year 3	5.6	5.8	-0.4*	0.2		0.059	11.7	10.9	0.0	0.6		0.978
Years 1, 2, and 3 combined	5.3	5.5	-0.4**	0.2		0.028	10.7	10.4	-0.6	0.5		0.224
Total number of observations (treatment and comparison) across all years: ED revisit	851,241						213,145					

Source: Medicare claims data for the period October 2010 through September 2015.

Note: Impact estimates and predicted means are regression-adjusted for baseline patient characteristics (including HCC scores) and baseline practice characteristics. 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 postintervention period compared with the preintervention period relative to the same difference over time for attributed Medicare FFS beneficiaries in matched comparison practices. For ED revisit, we also control for chronic conditions at baseline. For the readmissions and follow-up visits equations that are estimated at the discharge level, we also control for discharge-level risk factors. Number of observations includes the total number of treatment and comparison group observations across all years. For continuous quality-of-care outcome measures, we present the absolute impact estimate as well as its relative size in percentage terms. For binary quality-of-care outcome measures, we present the absolute impact estimate in only percentage points.

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

FFS = fee for service; ACSC = ambulatory care sensitive condition; ED = emergency department; PCP = primary care physician; HCC = hierarchical condition category.

APPENDIX D:

COMPARISON GROUP SELECTION

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This appendix describes the non-experimental selection of the comparison group used to measure impacts. From a pool of potential comparison practices, we matched CPC practices in each CPC region to other practices in the same or a similar region that have observed and (where possible) unobserved characteristics similar to the ones selected for the initiative. For each CPC region, the pool of potential comparison practices contained (1) practices that applied to the model in that region but were not selected, along with (2) practices from comparable external regions that were similar to CPC regions. We included the first group of nonselected practices in the potential comparison practice pool because they had expressed the same willingness to participate in the initiative as the selected practices and were therefore likely to share the same motivation (an unobserved characteristic) to provide enhanced primary care to beneficiaries. Additionally, being located in the same region as the CPC practices, the nonselected practices are subject to the same regional conditions as the CPC practices and would therefore help account for regional factors that could affect outcomes. A typical evaluation would not choose for its comparison group practices that had applied to CPC but were not selected. However, in this case, using nonselected applicants should not introduce selection bias, because CMS chose practices according to an application score based on criteria that were observable and objective —such as whether they were meaningful users of electronic health records (EHRs), their previous experience with practice transformation or the patient-centered medical home (PCMH) model, and the proportion of their patients covered by participating payers—and not based their pre-CPC outcomes or on subjective criteria. Second, we could ensure the within-region practices chosen for the comparison group offered comparable values for the limited measures that CMS considered from applications that might be related to subsequent performance—meaningful use of EHRs and PCMH recognition.

The second group of practices—those in the external comparison regions—help us to develop a sufficiently large pool of potential comparison practices, as well as to capture the status quo in the absence of the intervention in a representative set of regions that are similar to the CPC regions. The goal of propensity score matching was to select the best available matches for each CPC practice; a larger pool of potential comparisons yields better matches and ensures a sufficient sample of matched comparison practices even after discarding candidates that do not match well to any CPC practice. Further, including in the potential comparison practice pool both nonselected practices from the same CPC region as well as other practices from external comparison regions leads to a sample of matched comparison practices or a counterfactual that represents *similar* practices in *multiple* regions that share the same broad regional characteristics, instead of constraining the comparison practice pool to a single region for each CPC region.

We identified the potential comparison practices *within* each CPC region that had applied but had not been selected, using practice applications to CPC and information from the Center for Medicare & Medicaid Innovation (CMMI) about how CMMI scored and selected practices. We excluded from the pool practices that were eligible to apply because they are located within a CPC region, but who had not done so. We believe these practices are systematically different than practices that chose to apply, in terms of their motivation to transform care.

To identify potential comparison practices in *the external regions*, we used a two-step process. First, we identified comparison regions for each CPC region, based on geographic proximity, the application score CMMI assigned the region in the selection process, and the

primary care landscape. Second, within each of the external comparison regions, we defined a set of *potential* comparison practices.

For propensity score matching, the full pool of potential comparison practices includes both unselected applicants from the same region who met eligibility requirements, along with practices in the external regions. We detail our approach below.

A. Identifying external comparison regions

In the first step, we identified comparison areas. To maximize the face validity of our approach, we sought to select comparison regions that were in close geographic proximity to the CPC regions. We chose neighboring states for the four statewide CPC regions (Oregon, Colorado, Arkansas, and New Jersey). For the Hudson Valley–Capital District region (New York), we selected both a within-state region[1] and regions from neighboring states. We selected a within-state region for each of the two other CPC regions that cover only a portion of a state (greater Tulsa region in Oklahoma and the Cincinnati–Dayton region in Ohio and Kentucky). To ensure similarly motivated payers in the comparison areas, we sought to select as comparison regions only states or areas within a state that also applied to CPC but were not selected. Even though these regions were not selected, they are presumably closer to CPC regions in terms of payer interest than regions in which the payers were not interested or motivated enough to apply to CPC. In some cases, we included additional regions that did not have any payers that applied to CPC, to supplement the nonselected applicant regions, because there were too few practices located in the nonselected applicant regions to form a useful comparison group. Also, we ruled out states or areas that are participating in CMS's MAPCP demonstration, because many of the practices are already receiving a somewhat similar primary care intervention.

We also considered a variety of other factors in selecting comparison regions, including those listed in Table D.1.

Table D.1. Factors and data sources for selecting comparison regions

Factor	Data source
Whether region applied to CPC	CMMI, 2012
Number of primary care practices in a state	SK&A, 2010
Practice size	SK&A, 2010
PCMH activity in state	NCQA, 2011
Whether a state had other ongoing CMS demonstrations or initiatives, such as the Duals demonstration or the Medicaid Health Home Demonstration	CMMI, 2012
Percentage of practices in state with EHR system	Robert Wood Johnson Foundation, 2011
State-level information on rates of hospital discharges (medical and surgical) and mortality	Dartmouth Access Health Care, 2010

PCMH = primary care medical home; CMS = Centers for Medicare & Medicaid Services; CMMI = Center for Medicare & Medicaid Innovation; EHR = electronic health record; NCQA = National Committee for Quality Assurance.

[1] Within-state comparison regions will facilitate the analysis of Medicaid data, because Medicaid programs vary by state.

CMMI reviewed our proposed comparison regions before we selected final regions. We describe the final selected external comparison regions below.

Arkansas (a statewide region) has Tennessee as its comparison region. Tennessee is the only statewide region neighboring Arkansas in which payers applied to CPC. Compared with Arkansas, Tennessee has a similar proportion of small practices and comparable levels of EHR use.

For **Colorado (a statewide region)**, the comparison regions include Utah, New Mexico, and Kansas. We chose Utah for its geographic proximity and the presence of advanced primary care practices (especially in the Salt Lake City region). Also, Utah has a similar mix of small and large practices. Kansas, another neighboring state of Colorado, has a similar mix of small and large practices as well as similar rates of EHR use as Colorado, and it includes a region with payers that applied to CPC that was not selected. Finally, the two regions that applied to CPC in New Mexico are included in the comparison region pool for Colorado.

The **New Jersey region** and the **New York (Capital District–Hudson Valley region)** shared potential comparison region areas that included Connecticut and western and central New York. We chose Connecticut because payers there applied to CPC, and it is geographically proximate to both New York and New Jersey. It also has a similar mix of small and large practices, similar levels of PCMH activity, and high EHR use rates. Likewise, western and central New York are geographically proximate to the CPC regions in New York and New Jersey and are similar in terms of the mix of practice locations in rural versus urban areas.

The comparison region for the **Cincinnati-Dayton region of Ohio and Kentucky** includes the other counties in Ohio that were not part of CPC (many of which included payers that applied to CPC). By using the rest of Ohio for the comparison region, we ensure that both the CPC and comparison practices are similar in terms of state-level initiatives. Similarly, the proposed comparison region for the greater Tulsa region of Oklahoma comprises the other counties in Oklahoma with payers that applied but were not selected for CPC.

For **Oregon**, we chose Idaho and Washington as comparison regions. Idaho is the only other statewide region neighboring Oregon with payers that applied to CPC. However, because Idaho alone did not contain an adequate number of suitable comparison practices for Oregon, we chose Washington as an additional comparison region. Compared with Oregon, Washington has a similar proportion of large practices, as well as similar levels of PCMH activity and EHR use.

B. Identifying the pool of potential comparison practices

Within each of the external comparison regions, we defined a set of *potential* comparison practices using a roster of primary care practice sites and the physicians who practiced in them.[2] We used Medicare claims data to determine the corresponding tax identification number (TIN) used by the physicians in the practice.

[2] Physician records included National Provider Identifiers (NPIs) provided by SK&A, a marketing organization that collects this information directly from practices and updates its files on an ongoing basis. ARC used the tax

Because practices selected for CPC had to meet certain eligibility criteria imposed by CMS, potential comparison practices that had applied from within the CPC region but had not been selected and practices from the matched external comparison regions would ideally be screened using these same criteria (Table D.2). Therefore, where possible, we used the exact criteria or an approximation of the criteria for screening comparison practices. However, we could not apply some criteria for practices in the external regions, because data were not available.

Table D.2. Eligibility criteria for CPC practices

Eligibility criteria CMS used to select practices to participate in CPC	Criteria the evaluation applied for inclusion as a potential comparison practice
Application solicited practices composed predominantly of primary care practitioners (in specialties of family medicine, internal medicine, general practice or geriatric medicine)	Potential comparison practices must have at least one physician in the practice that specializes in family medicine, internal medicine, general practice, or geriatric medicine; percentage of practitioners with primary care specialty was also used as a matching variable
Number of assigned Medicare beneficiaries ≥ 120	Applied similar criteria (number of assigned Medicare beneficiaries ≥100)[a]
Application-reported annual revenue per practitioner of $200,000+ (among all Medicare and non-Medicare patients)	Criterion not applied, because data were not available for comparison practices in external regions, and CMMI did not apply strictly in the selection process
At least 50 percent of Medicare charges were for primary care E&M codes	Criterion not applied, because it was not applied strictly by CMMI in the selection process
Application-reported practice revenue was greater than 50 percent from participating payers	Criterion not applied, because CMMI did not apply criterion strictly in the selection process, and the criterion is not applicable to external comparison practices
Employer identification number must be recognized in CMS systems	TINs and NPIs are in claims data
Cannot be in Medicare shared savings program	ARC excluded potential comparison practices using the same criteria used for CPC practices

[a] We used a threshold of 100 attributed Medicare beneficiaries for comparison practices, because our analysis of Medicare claims data found that some CPC practices had between 100 and 120 attributed Medicare beneficiaries.

CMMI = Center for Medicare & Medicaid Innovation; E&M = evaluation and management; TIN = tax identification number; NPI = national provider identifier.

For each region, we were able to identify a pool of more than 400 potential comparison practices (Table D.3), far more than the 66 to 75 CPC practices in each region. Thus, this pool was large enough to find suitable matches for CPC practices.

identification numbers (TINs) and NPIs to attribute beneficiaries to potential comparison practices in the same way that they were attributed to CPC practices.

C. Selecting comparison practices from the pool of potential comparison practices

We used propensity score matching (PSM) to select from the pool of potential comparison practices. PSM selects comparison practices based on a summary score encapsulating a number of matching characteristics rather than requiring a match on each characteristic. In other words, PSM facilitates the task of matching CPC and comparison practices by aggregating into a single score information contained in a range of matching variables.[3]

Table D.3 shows the number of potential comparison practices and number of CPC practices in each region. (We included in the matching the 497 practices that were participating in CPC in March 2013.)

Table D.3. Number of potential comparison practices in CPC and comparison regions

		Potential comparison practices		
		In CPC region	In external region	
CPC region	Number of CPC practices	Number of nonselected practices in the CPC region applied and eligible for CPC	Comparison region	Total number of eligible primary care practices in external comparison region
Arkansas	69	32	Tennessee	870
Colorado	74	67	Utah, Kansas, and selected counties in New Mexico	684
New Jersey	70	96	Western and central New York and Connecticut	771
New York (Hudson Valley–Capital District)	74	26	Connecticut and western and central New York	482
Ohio/Kentucky (Greater Cincinnati)	75	75	Remaining counties in Ohio	1,401
Oklahoma (Greater Tulsa)	68	32	Remaining counties in Oklahoma	410
Oregon	67	61	Idaho and Washington	846

[3] Matching practices on a range of variables using a single summary score is advantageous, because it would be virtually impossible to find a comparison practice with the identical values of each variable for each treatment practice. Of course, if a comparison practice does match a treatment practice on every variable included in the propensity score model, the two practices would have identical propensity scores. In other words, propensity score matching may produce exact matching on some or all matching variables simultaneously, but it does not require it.

The propensity score matching approach helps alleviate concerns about selection bias by ensuring equivalence before the CPC intervention (at baseline) between the CPC and matched comparison groups on variables used in the matching process. However, matching still relies on *observed* characteristics; therefore, it cannot address bias arising from *unobserved* or unmeasured baseline characteristics. Past studies have shown that impact estimates based on a matched comparison group design often deviate from those obtained from an experimental evaluation (considered the gold standard) of the same intervention (Smith and Todd 2005; Peikes et al. 2008). In other words, PSM may not entirely eliminate selection bias in a non-experimental evaluation, especially when the CPC practices volunteered to receive the intervention, and it can even yield results with the wrong sign. However, when implemented carefully using the best practices recommended in the literature, PSM can be effective in addressing selection bias concerns to a large extent (Rubin 2001; Dehejia and Wahba 2002; Dehejia 2005; Shadish et al. 2008). Hence, in the absence of randomization, PSM remains one of the best approaches for designing a non-experimental evaluation.[4]

The PSM steps involved in selecting the matched comparison practices from the pool of potential comparison practices for the CPC evaluation included:

1. Assembling data on matching variables for CPC and potential comparison practices
2. Using PSM to narrow down the potential comparison practices and obtain matched comparison practices for CPC practices in each CPC region
3. Performing diagnostic tests to assess the matched comparison group

Step 1: Assembling data on matching variables for CPC and potential comparison practices

Table D.4 shows the data sources and the variables included in matching. The practice-level variables from the claims data were constructed by averaging across all beneficiaries attributed to the practice.

Step 2: Using PSM to narrow down the potential comparison practices and obtain matched comparison practices for CPC practices in each CPC region

Once the data were assembled and a file containing information on each CPC and potential comparison practice was created, we estimated the propensity score model using as covariates the variables described in Table D.4. Specifically, we estimated a logit model with a binary dependent variable for participation status, one for CPC practices and zero for potential

[4] Additionally, the proposed difference-in-differences approach for estimating impacts on claims-based outcome measures—whereby we compare the change over time in an outcome for beneficiaries in treatment practices to the change for beneficiaries in matched comparison practices—nets out any pre-existing differences in levels between treatment and comparison practices at baseline that were not accounted for by propensity score matching, provided they would not have changed over time in the absence of CPC. We will also test whether there were pre-existing differences in trends between CPC and comparison practices. The difference-in-differences analysis together with propensity score matching therefore helps eliminate biases due to unobserved differences in practice characteristics that do not change over time. However, the difference from external comparison regions leads to a sample of matched comparison practices or a counterfactual that represents *similar* practices. A difference-in-differences approach is not possible for analyses of survey outcomes, because we could not conduct a pre-CPC survey.

comparison practices. The predicted probabilities from this model, estimated separately by region, are the propensity scores used to match practices. Notably, PSM does not necessarily match each CPC practice to a comparison practice (or practices) with identical characteristics; rather, by matching on the score, the method finds a *group* of comparison practices that is on average comparable to the *group* of CPC practices. The propensity scores are functions of practice characteristics, region characteristics, and characteristics of the practice's attributed Medicare beneficiaries.

Our PSM model prioritized matching CPC and comparison practices based on key characteristics. Within the practice characteristics, we focused on ensuring that the comparison practices matched the CPC practices especially well on two variables: (1) the meaningful use of EHRs and (2) designation as a patient-centered medical home.[5] This approach reflects the importance of those two variables for face validity as well as CMS's selection of CPC practices from eligible applicants. To ensure an exact CPC-comparison group match in each region on meaningful use, which we deemed the most important practice characteristic given the heavy reliance by CMS on this factor when selecting the CPC practices, we used it for stratification; in one region (Colorado), we also stratified by medical home status.[6] Stratification on a given characteristic means that only the potential comparison practices with that characteristic are eligible to be selected as matches for practices with that characteristic, and the propensity score model is estimated separately within each stratum.

For practices' patient characteristics, we include in the model the distribution of the mean HCC score for the Medicare patients attributed to that practice and their prevalence of chronic conditions such as diabetes, to ensure that the selected comparison practices serve a similar mix of patients as CPC practices. We also included variables in the propensity score model reflecting the practice's beneficiaries' distribution of service use and expenditures, to ensure that the two research groups would have comparable baseline values of these key outcomes.

Within the family of PSM methods, we implemented "full matching" to form matched sets that contain one CPC and multiple comparison practices or one comparison and multiple CPC practices. A "match" for a given CPC practice was identified whenever the propensity score for the potential comparison practice fell within a pre-specified range around the CPC practice's propensity score. The important benefit of full matching is that it achieves maximum bias reduction on observed matching variables, and subject to this constraint, it maximizes the size of the comparison sample. Full matching also varies the number of comparison practices selected for each CPC practice. For example, CPC practices with a combination of characteristics that were difficult to match had relatively fewer available comparison practices with similar characteristics; thus, these practices were included in matched sets that contained (say) two CPC practices and one comparison practice. On the other hand, CPC practices that were easier to

[5] We could consider only PCMH recognitions that were available for both CPC practices and non-CPC practices. Thus, we included NCQA recognition in all regions and state recognition in regions for which information on state recognition was available for both CPC and non-CPC practices.

[6] We did not stratify on medical-home status in every region, because stratifying by one measure makes it more difficult to achieve balance on other characteristics. Therefore, we stratified on medical-home status only where it was otherwise difficult to obtain a similar percentage of recognized medical homes in the treatment and comparison groups.

match were each matched to multiple comparisons so as to maximize the size of the analytic sample and increase statistical power. For the easy-to-match cases, we allowed as many as five comparison matches for a single CPC practice. For practices that were difficult to match, we allowed a comparison practice to serve as the match for two CPC practices. Comparison practices were weighted by the ratio of CPC to comparison practices; for example, if five comparison practices were matched to one CPC practice, each of those comparison practices would receive a weight of one-fifth. In most regions, we did not allow comparison practices to serve as the match for more than two CPC practices due to concerns about a heavily weighted comparison practice possibly not responding to the survey, and to the adverse effect that large weights have on statistical precision and power.

Matching was generally performed separately by region. The process involved (1) estimating a propensity score model using all CPC and all potential comparison practices in the region; (2) calculating CPC-comparison differences along the propensity score; (3) stratifying on meaningful use of EHRs; and (4) implementing the full matching algorithm, which finds the collection of matched sets whose sum of propensity score differences is the smallest among all possible matches.

Step 3: Performing diagnostic tests

The diagnostic tests included calculating the difference between the CPC and the selected comparison group in the weighted mean values of each of the matching variables, the statistical significance of those differences, and the overall Chi-squared test statistic that tests the joint CPC-comparison difference among all matching variables. If the matching diagnostics were not satisfactory, we revised the matching in two ways. First, we allowed a given comparison practice to serve as a match for as many as three CPC practices in Oregon (instead of our usual cap of two), because the CPC practices were generally much less similar to potential comparisons. This increased ratio allowed the matching algorithm to effectively select comparison groups with comparable values of key characteristics to the CPC groups, particularly meaningful use of EHRs and whether the practice was a recognized medical home. Second, for some regions, we implemented stratification on medical-home designation (in addition to stratifying on EHR meaningful use) to ensure the CPC group and selected comparison group had comparable proportions of medical homes.

To obtain the best possible matches for the New York and New Jersey regions, we took advantage of their geographic proximity by considering Connecticut and the non-CPC areas of New York jointly as potential comparisons for both regions (along with the nonselected applicants in these regions). We first constructed two subpools within the comparison regions: one that was most similar to the New York CPC region, and one that was most similar to the New Jersey CPC region. We then used these subpools to conduct separate matching for the New York and New Jersey regions using the same process described for other regions.

As part of our diagnostics, we produced tables (Tables D.5 through D.11) showing two types of results: (1) means for the potential comparison, CPC, and selected comparison groups and (2) differences between the CPC group means and the weighted means for the selected comparison group for all variables and distributions used in the matching process, and tests of statistical significance. Table D.12 shows the overall Chi-square test, which indicates the likelihood of observing a set of differences on the characteristics used that is as large as what

was observed if the CPC and comparison practices in the matched sample were equivalent on all the matching characteristics indicated. Thus, a value of $p = 0.40$ for the Chi-squared test suggests a 40 percent chance of observing CPC-comparison differences as large as were observed on the set of matching variables in this sample of patients if the matched comparison practices were truly equivalent to the set of CPC group practices. In a typical hypothesis test, we reject the null hypothesis of equivalence only if $p < 0.05$—that is, it is highly unlikely that the two populations are equivalent on these dimensions. Here, however, because we do not want to falsely conclude that the two groups are equivalent when they are not, we strive for a p that is as large as possible, and always more than 0.15—that is, given the observed differences, it is well within the realm of possibility that the two groups are equivalent. Table D.12 also shows the final numbers of selected practices as well as the ratio of CPC to selected comparison practices in each matched set. For example, a ratio of 2:1 means that there were two CPC practices matched to one comparison practice.

The unweighted counts of practices in the accompanying tables reflect the number of practices (CPC and comparison) we selected through propensity score matching in each region. Our final sample includes 908 comparison practices: 658 from external regions and 250 from internal regions.

Table D.4. Propensity score matching variables and data sources

Matching variable	Data source
Practice characteristics	
Number of Medicare or Medicaid meaningful users of EHRs in the practice	CMS, 2012
Number of primary care clinicians (physicians, nurse practitioners, physician assistants)	SK&A, 2012
Percentage of clinicians at practice with primary care specialty	SK&A, 2012
NCQA or state medical home recognition status	NCQA, CPC application data, Oklahoma Sooner Care data, 2012
Whether the practice is owned by a larger organization	SK&A, 2012
Characteristics of practices' attributed Medicare beneficiaries	
Number of attributed Medicare beneficiaries	Medicare claims data, May 2010 through April 2012
Distribution of Medicare expenditures of practices' attributed beneficiaries	Medicare claims, May 2010 through April 2012
Distribution of number of hospitalizations of practices' attributed beneficiaries	Medicare claims, May 2010 through April 2012
Distribution of HCC scores of practices' attributed beneficiaries	Medicare claims and enrollment data, May 2010 through April 2012
Distribution of number of physician services received by practices' attributed beneficiaries	Medicare claims data, May 2010 through April 2012
Demographic mix of attributed patients (percentage of practice in age, race, and gender categories)	Medicare EDB, May 2010 through April 2012
Percentage of practice's attributed patients that is dually eligible for Medicaid	Medicare EDB, May 2010 through April 2012

Matching variable	Data source
Percentage of practice's attributed Medicare beneficiaries with selected chronic conditions (diabetes, cancer, chronic obstructive pulmonary disease, kidney disease, Alzheimer's disease, heart disease)	Medicare claims data, May 2010 through April 2012
Characteristics of practice's geographic location	
Median income of county	Area Resource File, 2009
Whether in medically underserved area	HRSA, 2009
Whether in urban area	Area Resource File, 2009
Medicare Advantage penetration rate of county	Area Resource File, 2009

EHR = electronic health record; CMS = Centers for Medicare & Medicaid Services; NCQA = National Committee for Quality Assurance; HCC = hierarchical condition category; Medicare EDB = Medicare Enrollment Database; HRSA = Health Resources and Services Administration.

Table D.5. Matching results for CPC practices in Arkansas with comparison group practices from nonselected applicants in Arkansas and external region practices in Tennessee

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Practice characteristics (percentage, unless noted)					
Has Medicare meaningful EHR users as of June 2012	47	64	64	0	1.000
Is state- or NCQA-recognized medical home by fall 2012	9	9	9	-1	0.900
Employs one clinician (MD or NP/PA according to SK&A)	40	34	26	-8	0.290
Employs two or three clinicians (MD/NP/PA according to SK&A)	26	27	32	5	0.560
Employs four or five clinicians (MD/NP/PA according to SK&A)	13	15	16	1	0.940
Employs six or more clinicians (MD/NP/PA according to SK&A)	20	23	26	3	0.740
Number of clinicians at practice (SK&A)[a]	4.5	5.1	3.9	-1.2	0.320
Percentage of practices' clinicians with primary care specialty (SK&A)	96	97	96	0	0.880
Is owned by larger organization (defined by SK&A data)	25	30	35	5	0.570
Log (household income in county 2009) (Area Resource File)	10.6	10.6	10.6	0.0	0.470
Medicare Advantage penetration rate in 2009 (Area Resource File)	14.5	13.1	12.1	-1.0	0.310
Located in a medically underserved area (2009 HRSA data)	47	44	43	0	0.970
Percentage of county that is urban (2009 Area Resource File)	55	55	53	-1	0.740
Characteristics of beneficiaries attributed to practices between May 2010 and April 2012					
Count of attributed Medicare beneficiaries[a]	777	971	819	-151	0.360
Log (number of attributed Medicare beneficiaries)	6.18	6.34	6.38	0.04	0.800
Percentage of the practice's patients who are dually eligible for Medicaid	25	23	24	1	0.600
Percentage male	40	41	40	0	0.790
Percentage age 50 to 64	16	16	17	1	0.530
Percentage age 65 to 74	42	43	42	-1	0.240
Percentage age 75 to 84	25	25	25	-1	0.540
Percentage age 85 or older	8	7	8	0	0.660
Percentage white	89.2	89.1	90.6	1.5	0.467
Percentage black	9.7	9.9	7.8	-2.1	0.316
Percentage Asian	0.2	0.2	0.2	0.0	0.401
Percentage Native American	0.1	0.1	0.4	0.3	0.091*
Percentage Hispanic	0.2	0.2	0.5	0.3	0.189

Table D.5. (*continued*)

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Percentage other	0.5	0.4	0.5	0.0	0.552
Unknown race	0.1	0.1	0.1	0.0	0.114
HCC Score–mean	1.04	1.02	0.99	-0.03	0.280
Original Medicare entitlement reason is age	71	71	69	-2	0.350
Percentage of beneficiaries with diabetes	29	28	26	-2	0.040
Percentage of beneficiaries with cancer	8	8	7	0	0.510
Percentage of beneficiaries with chronic obstructive pulmonary disease	15	15	14	-1	0.270
Percentage of beneficiaries with chronic kidney disease	15	14	12	-2	0.050*
Percentage of beneficiaries with Alzheimer's disease	12	10	11	1	0.690
Percentage of beneficiaries with congestive heart failure	16	17	15	-1	0.330
Annualized Medicare expenditures and service use January 2010 through February 2012 among beneficiaries attributed between May 2010 and April 2012					
Inpatient hospital visits–mean	0.30	0.29	0.30	0.01	0.630
Emergency department visits–mean	0.69	0.64	0.67	0.03	0.490
Number of physician services received–mean	24.41	23.94	23.32	-0.62	0.390
Log of total Medicare expenditures–mean	8.90	8.86	8.85	-0.01	0.850
Average total Medicare Part A and B expenditures[a]	7,643	7,283	7,158	-126	0.690

[a] We include this version of the measure for descriptive purposes, but it was not included in the Chi-square test reported on Table D.12.

*Indicates *p*-value for difference between CPC practices and selected comparison practices is less than 0.1.
EHR = electronic health record; NCQA = National Committee for Quality Assurance; MD = medical doctor; NP = nurse practitioner; PA = physician assistant; HRSA = Health Resources and Services Administration; HCC = hierarchical condition category.

Table D.6. Matching results for CPC practices in Colorado with Comparison group practices from nonselected applicants in Colorado and external region practices in Kansas, New Mexico, and Utah

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Practice characteristics (percentage, unless noted)					
Has Medicare meaningful EHR users as of June 2012	71	92	92	0	1.000
Is state- or NCQA-recognized medical home by fall 2012	10	28	28	0	1.000
Employs one clinician (MD or NP/PA according to SK&A)	16	8	11	3	0.620
Employs two or three clinicians (MD/NP/PA according to SK&A)	31	36	31	-5	0.510
Employs four or five clinicians (MD/NP/PA according to SK&A)	20	16	27	11	0.170
Practice has six or more clinicians (MD/NP/PA according to SK&A)	34	39	31	-8	0.360
Number of clinicians at practice (SK&A)[a]	5.9	5.9	5.3	-0.6	0.560
Percentage of practices' clinicians with primary care specialty (SK&A)	95	94	95	1	0.840
Owned by larger organization (defined by SK&A data)	51	54	61	7	0.440
Log (household income in county 2009) (Area Resource File)	10.9	10.9	11.0	0.1	0.230
Medicare Advantage penetration rate in 2009 (Area Resource File)	24.0	24.8	28.3	3.5	0.110
Located in a medically underserved area (2009 HRSA data)	8	6	4	-2	0.580
Percentage of county that is urban (2009 Area Resource File)	78	76	80	3	0.410
Characteristics of beneficiaries attributed to practices between May 2010 and April 2012					
Count of attributed Medicare beneficiaries[a]	728	672	558	-114	0.370
Log (number of attributed Medicare beneficiaries)	6.07	6.13	6.10	-0.04	0.810
Percentage of the practice's patients who are dually eligible for Medicaid	16	14	12	-2	0.230
Percentage male	42	41	43	1	0.320
Percentage age 50 to 64	13	13	13	0	0.710
Percentage age 65 to 74	45	46	49	3	0.090*
Percentage age 75 to 84	26	27	25	-1	0.270
Percentage age 85 or older	9	9	8	-1	0.400
Percentage white	93.7	94.0	95.3	1.3	0.195
Percentage black	2.7	2.6	1.4	-1.2	0.109
Percentage Asian	0.7	0.5	0.5	-0.1	0.583
Percentage Native American	0.2	0.1	0.1	0.0	0.666
Percentage Hispanic	1.5	1.4	1.4	-0.1	0.866

Table D.6. (*continued*)

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Percentage other	1.0	1.1	1.1	0.0	0.797
Unknown race	0.2	0.2	0.2	0.1	0.192
HCC Score–mean	0.95	0.93	0.89	-0.04	0.120
Original Medicare entitlement reason is age	81	82	85	2	0.160
Percentage of beneficiaries with diabetes	23	22	19	-3	0.000*
Percentage of beneficiaries with cancer	8	9	9	0	1.000
Percentage of beneficiaries with chronic obstructive pulmonary disease	11	11	10	-1	0.080
Percentage of beneficiaries with chronic kidney disease	12	12	11	-1	0.570
Percentage of beneficiaries with Alzheimer's disease	8	8	7	-1	0.380
Percentage of beneficiaries with congestive heart failure	11	11	9	-2	0.010*
Annualized Medicare expenditures and service use January 2010 through February 2012 among beneficiaries attributed between May 2010 and April 2012					
Inpatient hospital visits–mean	0.24	0.24	0.22	-0.03	0.080*
Emergency department visits–mean	0.57	0.56	0.50	-0.06	0.150
Number of physician services received–mean	22.34	22.28	22.09	-0.19	0.760
Log of total Medicare expenditures–mean	8.84	8.84	8.79	-0.04	0.290
Average total Medicare Part A and B expenditures [a]	7,244	7,082	6,814	-269	0.410

[a] We include this version of the measure for descriptive purposes, but it was not included in the Chi-square test reported on Table D.12.

*Indicates *p*-value for difference between CPC practices and selected comparison practices is less than 0.1.

EHR = electronic health record; NCQA = National Committee for Quality Assurance; MD = medical doctor; NP = nurse practitioner; PA = physician assistant; HRSA = Health Resources and Services Administration; HCC = hierarchical condition category.

Table D.7. Matching results for CPC practices in New Jersey with comparison group practices from nonselected applicants in New Jersey and New York and external region practices in western and central New York and Connecticut

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Practice characteristics (percentage, unless noted)					
Has Medicare meaningful EHR users as of June 2012	57	90	90	0	1.000
Is state- or NCQA-recognized medical home by fall 2012	25	37	39	1	0.320
Has one clinician (MD or NP/PA according to SK&A)	26	22	31	10	0.210
Has two or three clinicians (MD/NP/PA according to SK&A)	31	26	30	4	0.620
Has four or five clinicians (MD/NP/PA according to SK&A)	20	29	19	-11	0.160
Has six or more clinicians (MD/NP/PA according to SK&A)	23	23	20	-3	0.650
Number of clinicians at practice (SK&A)[a]	4.7	5.2	3.6	-1.5	0.090*
Percentage of practices' clinicians with primary care specialty (SK&A)	88	93	96	3	0.270
Owned by larger organization (defined by SK&A data)	38	45	40	-5	0.570
Log (household income in county 2009) (Area Resource File)	11.1	11.1	11.2	0.1	0.030*
Medicare Advantage penetration rate in 2009 (Area Resource File)	0.2	0.1	0.1	-1.4	0.020*
Located in a medically underserved area (2009 HRSA data)	6	3	4	1	0.820
Percentage of county that is urban (2009 Area Resource File)	85	85	91	6	0.030*
Characteristics of beneficiaries attributed to practices between May 2010 and April 2012					
Count of attributed Medicare beneficiaries[a]	595	681	594	-87	0.330
Log (number of attributed Medicare beneficiaries)	6.01	6.20	6.12	-0.08	0.550
Percentage of the practice's patients who are dually eligible for Medicaid	16	13	12	-1	0.810
Percentage male	40	40	38	-2	0.270
Percentage age 50 to 64	13	12	12	0	0.900
Percentage age 65 to 74	42	44	43	-1	0.570
Percentage age 75 to 84	29	29	29	0	0.870
Percentage age 85 or older	11	11	12	1	0.620
Percentage white	87.2	90.7	87.8	-2.9	0.225
Percentage black	8.3	4.8	6.3	1.5	0.400
Percentage Asian	0.8	0.7	1.1	0.3	0.238
Percentage Native American	0.1	0.0	0.0	0.0	0.572
Percentage Hispanic	1.7	1.7	2.8	1.1	0.314

Table D.7. (*continued*)

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Percentage other	1.5	1.6	1.7	0.1	0.594
Unknown race	0.3	0.4	0.3	-0.1	0.011*
HCC score–mean	1.06	1.01	1.06	0.06	0.130
Original Medicare entitlement reason is age	81	84	84	0	0.780
Percentage of beneficiaries with diabetes	32	31	33	1	0.500
Percentage of beneficiaries with cancer	10	10	11	0	0.680
Percentage of beneficiaries with chronic obstructive pulmonary disease	12	11	11	0	0.770
Percentage of beneficiaries with chronic kidney disease	14	13	15	2	0.230
Percentage of beneficiaries with Alzheimer's disease	10	9	10	1	0.550
Percentage of beneficiaries with congestive heart failure	14	13	14	2	0.130
Annualized Medicare expenditures and service use January 2010 through February 2012 among beneficiaries attributed between May 2010 and April 2012					
Inpatient hospital visits–mean	0.26	0.22	0.24	0.02	0.290
Emergency department visits–mean	0.56	0.50	0.49	-0.01	0.750
Number of physician services received–mean	28.03	27.01	29.59	2.57	0.020*
Log of total Medicare expenditures–mean	8.96	8.90	8.96	0.07	0.210
Average total Medicare Part A and B expenditures [a]	8,120	7,484	8,265	781	0.210

[a] We include this version of the measure for descriptive purposes, but it was not included in the Chi-square test reported on Table D.12.

*Indicates *p*-value for difference between CPC practices and selected comparison practices is less than 0.1.

EHR = electronic health record; NCQA = National Committee for Quality Assurance; MD = medical doctor; NP = nurse practitioner; PA = physician assistant; HRSA = Health Resources and Services Administration; HCC = hierarchical condition category.

Table D.8. Matching results for CPC practices in New York (Hudson Valley-Capital District region) with comparison group practices from nonselected applicants in New York and New Jersey and external region practices in Connecticut and New York

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Practice characteristics (percentage, unless noted)					
Has Medicare meaningful EHR users as of June 2012	42	81	81	0	1.000
Is state- or NCQA-recognized medical home by fall 2012	27	35	35	1	0.940
Has one clinician (MD or NP/PA according to SK&A)	26	15	18	2	0.760
Has two or three clinicians (MD/NP/PA according to SK&A)	31	31	39	9	0.320
Has four or five clinicians (MD/NP/PA according to SK&A)	18	21	15	-6	0.360
Has six or more clinicians (MD/NP/PA according to SK&A)	25	33	28	-4	0.570
Number of clinicians at Practice (SK&A)[a]	4.8	6.2	4.9	-1.2	0.440
Percentage of practices' clinicians with primary care specialty (SK&A)	94	94	94	0	0.920
Owned by larger organization (defined by SK&A data)	38	53	43	-10	0.240
Log (household income in county 2009) (Area Resource File)	10.9	10.9	11.0	0.1	0.000*
Medicare Advantage penetration rate in 2009 (Area Resource File)	26.5	29.8	21.6	-8.2	0.000*
Located in a medically underserved area (2009 HRSA data)	5	4	7	3	0.510
Percentage of county that is urban (2009 Area Resource File)	74	73	77	4	0.360
Characteristics of beneficiaries attributed to practices between May 2010 and April 2012					
Count of attributed Medicare beneficiaries[a]	465	524	533	9	0.890
Log (number of attributed Medicare beneficiaries)	5.83	5.92	6.07	0.15	0.230
Percentage of the practice's patients who are dually eligible for Medicaid	16	16	13	-3	0.090*
Percentage male	40	41	40	-1	0.630
Percentage age 50 to 64	13	14	13	-1	0.150
Percentage age 65 to 74	40	38	40	2	0.130
Percentage age 75 to 84	29	29	29	1	0.340
Percentage age 85 or older	11	11	11	0	0.780
Percentage white	93.1	93.8	91.6	-2.2	0.126
Percentage black	4.4	3.8	5.2	1.4	0.157
Percentage Asian	0.5	0.5	0.6	0.1	0.515
Percentage Native American	0.1	0.1	0.0	0.0	0.082*
Percentage Hispanic	0.6	0.5	1.0	0.5	0.281

Table D.8. (*continued*)

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Percentage other	1.0	1.1	1.2	0.2	0.380
Unknown race	0.3	0.3	0.3	0.0	0.383
HCC score–mean	1.03	1.04	1.04	0.00	0.960
Original Medicare entitlement reason is age	78	76	79	3	0.070*
Percentage of beneficiaries with diabetes	31	30	30	0	0.880
Percentage of beneficiaries with cancer	10	10	10	0	0.350
Percentage of beneficiaries with chronic obstructive pulmonary disease	12	13	12	-1	0.330
Percentage of beneficiaries with chronic kidney disease	13	13	13	0	0.730
Percentage of beneficiaries with Alzheimer's disease	9	10	9	-1	0.420
Percentage of beneficiaries with congestive heart failure	13	13	13	0	0.850
Annualized Medicare expenditures and service use January 2010 through February 2012 among beneficiaries attributed between May 2010 and April 2012					
Inpatient hospital visits–mean	0.24	0.24	0.25	0.02	0.270
Emergency department visits–mean	0.54	0.55	0.54	-0.01	0.850
Number of physician services received–mean	25.65	24.93	27.2	2.29	0.020*
Log of total Medicare expenditures–mean	8.81	8.79	8.86	0.07	0.120
Average total Medicare Part A and B expenditures[a]	6,961	6,847	7,325	478	0.240

[a] We include this version of the measure for descriptive purposes, but it was not included in the Chi-square test reported on Table D.12.

*Indicates *p*-value for difference between CPC practices and selected comparison practices is less than 0.1.

EHR = electronic health record; NCQA = National Committee for Quality Assurance; MD = medical doctor; NP = nurse practitioner; PA = physician assistant; HRSA = Health Resources and Services Administration; HCC = hierarchical condition category.

Table D.9. Matching results for CPC practices in Ohio/Kentucky (Cincinnati-Dayton region) with comparison group practices from nonselected applicants and external region practices in Ohio

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Practice characteristics (percentage, unless noted)					
Has Medicare meaningful EHR users as of June 2012	26	100	100	0	1.000
Is state- or NCQA-recognized medical home by fall 2012	6	49	57	8	0.320
Has one clinician (MD or NP/PA according to SK&A)	40	13	11	-3	0.610
Has two or three clinicians (MD/NP/PA according to SK&A)	35	51	39	-12	0.150
Has four or five clinicians (MD/NP/PA according to SK&A)	13	16	33	17	0.030*
Has six or more clinicians (MD/NP/PA according to SK&A)	12	20	17	-3	0.650
Number of clinicians at practice (SK&A)[a]	3.8	4.9	4.6	-0.3	0.480
Percentage of practices' clinicians with primary care specialty (defined by SK&A)	95	95	93	-2	0.280
Owned by larger organization (defined by SK&A data)	27	53	57	4	0.630
Log (household income in county 2009) (Area Resource File)	10.7	10.8	10.8	0.0	0.810
Medicare Advantage penetration rate in 2009 (Area Resource File)	26	27	27	0	0.990
Located in a medically underserved area (2009 HRSA data)	8	0	0	0	1.000
Percentage of county that is urban (2009 Area Resource File)	74.0	86.4	86.7	0.4	0.880
Characteristics of beneficiaries attributed to practices between May 2010 and April 2012					
Count of attributed Medicare beneficiaries[a]	391	564	595	31	0.660
Log (number of attributed Medicare beneficiaries)	5.68	6.05	6.18	0.13	0.240
Percentage of the practice's patients who are dually eligible for Medicaid	24	14	14	0	0.980
Percentage male	42	41	41	0	0.920
Percentage age 50 to 64	15	13	13	0	0.620
Percentage age 65 to 74	39	44	44	0	0.670
Percentage age 75 to 84	27	28	27	-1	0.550
Percentage age 85 or older	10	10	9	-1	0.360
Percentage white	90.5	93.9	93.6	-0.3	0.856
Percentage black	7.9	4.7	5.0	0.3	0.830
Percentage Asian	0.4	0.4	0.4	0.0	0.817
Percentage Native American	0.0	0.0	0.0	0.0	0.842
Percentage Hispanic	0.3	0.2	0.1	-0.1	0.177

Table D.9. (*continued*)

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Percentage other	0.6	0.6	0.6	0.1	0.510
Unknown race	0.2	0.2	0.2	0.0	0.776
HCC Score–mean	111	103	102	-2	0.430
Original Medicare entitlement reason is age	73	80	80	-1	0.650
Percentage of beneficiaries with diabetes	33	29	29	0	0.670
Percentage of beneficiaries with cancer	8	9	9	0	0.640
Percentage of beneficiaries with chronic obstructive pulmonary disease	17	13	13	0	0.550
Percentage of beneficiaries with chronic kidney disease	16	16	15	0	0.550
Percentage of beneficiaries with Alzheimer's disease	10	9	8	-1	0.180
Percentage of beneficiaries with congestive heart failure	16	14	13	-0.01	0.320
Annualized Medicare expenditures and service use January 2010 through February 2012 among beneficiaries attributed between May 2010 and April 2012					
Inpatient hospital visits–mean	0.32	0.30	0.28	-0.02	0.080
Emergency department visits–mean	0.78	0.62	0.60	-0.01	0.670
Number of physician services received–mean	24.03	24.35	23.51	-0.84	0.170
Log of total Medicare expenditures–mean	8.95	8.91	8.87	-0.03	0.250
Average total Medicare Part A and B expenditures[a]	8,059	7,578	7,237	-340	0.150

[a] We include this version of the measure for descriptive purposes, but it was not included in the Chi-square test reported on Table D.12.

*Indicates *p*-value for difference between CPC practices and selected comparison practices is less than 0.1.

EHR = electronic health record; NCQA = National Committee for Quality Assurance; MD = medical doctor; NP = nurse practitioner; PA = physician assistant; HRSA = Health Resources and Services Administration; HCC = hierarchical condition category.

Table D.10. Matching results for CPC practices in Oklahoma (Greater Tulsa Region) with comparison group practices from nonselected applicants and external region practices in Oklahoma

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Practice characteristics (percentage, unless noted)					
Has Medicare meaningful EHR users as of June 2012	36	50	50	0	1.000
Is state- or NCQA-recognized medical home by fall 2012	42	49	47	-2	0.830
Has one clinician (MD or NP/PA according to SK&A)	25	19	19	0	0.981
Has two or three clinicians (MD/NP/PA according to SK&A)	29	27	31	4	0.624
Has four or five clinicians (MD/NP/PA according to SK&A)	24	33	32	0	0.974
Has six or more clinicians (MD/NP/PA according to SK&A)	22	21	18	-4	0.573
Number of clinicians at practice (SK&A)[a]	4.6	4.6	4.2	-0.4	0.635
Percentage of practices' clinicians with primary care specialty (SK&A)	89	93	91	-2	0.529
Owned by larger organization (defined by SK&A data)	55	74	74	0	1.000
Log (household income in county 2009) (Area Resource File)	10.6	10.6	10.7	0.0	0.078*
Medicare Advantage penetration rate in 2009 (Area Resource File)	16	19	23	4	0.008*
Located in a medically underserved area (2009 HRSA data)	23	23	15	-8	0.143
Percentage of county that is urban (2009 Area Resource File)	70.4	68.6	72.1	3.5	0.493
Characteristics of beneficiaries attributed to practices between May 2010 and April 2012					
Count of attributed Medicare beneficiaries[a]	686	782	657	-125	0.211
Log (number of attributed Medicare beneficiaries)	6.12	6.32	6.22	-0.10	0.465
Percentage of the practice's patients who are dually eligible for Medicaid	20	18	20	1	0.616
Percentage male	41	41	40	-1	0.478
Percentage age 50 to 64	16	14	16	2	0.090*
Percentage age 65 to 74*	45	45	44	-1	0.533
Percentage age 75 to 84	25	26	24	-2	0.147
Percentage age 85 or older	7	7	7	0	0.937
Percentage white	85.9	85.8	84.1	-1.7	0.543
Percentage black	4.5	4.4	4.1	-0.3	0.784
Percentage Asian	0.8	0.5	0.4	-0.1	0.746
Percentage Native American	7.7	8.2	10.4	2.2	0.446
Percentage Hispanic	0.4	0.3	0.3	0.0	0.875

Table D.10. (*continued*)

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Percentage other	0.6	0.6	0.5	-0.1	0.535
Unknown race	0.1	0.1	0.1	0.0	0.899
HCC Score–mean	100	99	98	-1	0.702
Original Medicare entitlement reason is age	75	76	74	-2	0.274
Percentage of beneficiaries with diabetes	30	30	29	-1	0.618
Percentage of beneficiaries with cancer	8	8	7	0	0.187
Percentage of beneficiaries with chronic obstructive pulmonary disease	15	14	13	-1	0.262
Percentage of beneficiaries with chronic kidney disease	14	14	14	0	0.821
Percentage of beneficiaries with Alzheimer's disease	9	8	8	0	0.618
Percentage of beneficiaries with congestive heart failure	15	15	14	-1	0.105
Annualized Medicare expenditures and service use January 2010 through February 2012 among beneficiaries attributed between May 2010 and April 2012					
Inpatient hospital visits–mean	0.29	0.30	0.29	0.00	0.905
Emergency department visits–mean	0.67	0.63	0.62	-0.01	0.820
Number of physician services received–mean	21.93	21.69	22.26	0.57	0.442
Log of total Medicare expenditures–mean	8.91	8.89	8.87	-0.02	0.640
Average total Medicare Part A and B expenditures[a]	7,679	7,398	7,337	-60	0.850

[a] We include this version of the measure for descriptive purposes, but it was not included in the Chi-square test reported on Table D.12.

*Indicates *p*-value for difference between CPC practices and selected comparison practices is less than 0.1.

EHR = electronic health record; NCQA = National Committee for Quality Assurance; MD = medical doctor; NP = nurse practitioner; PA = physician assistant; HRSA = Health Resources and Services Administration; HCC = hierarchical condition category.

Table D.11. Matching results for CPC practices in Oregon with comparison group practices from nonselected applicants in Oregon and external region practices in Idaho and Washington

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Practice characteristics (percentage, unless noted)					
Has Medicare meaningful EHR users as of June 2012	43	72	72	0	1.000
Is state- or NCQA-recognized medical home by fall 2012	20	46	61	15	0.010*
Has one clinician (MD or NP/PA according to SK&A)	7	6	3	-3	0.530
Has two or three clinicians (MD/NP/PA according to SK&A)	20	24	18	-6	0.450
Has four or five clinicians (MD/NP/PA according to SK&A)	23	19	28	10	0.300
Has six or more clinicians (MD/NP/PA according to SK&A)	51	52	51	-1	0.920
Number of clinicians at practice (SK&A)[a]	12.0	9.8	8.5	-1.26	0.600
Percentage of practices' clinicians with primary care specialty (SK&A)	88	90	93	3	0.380
Owned by larger organization (defined by SK&A data)	71	72	76	4	0.630
Is critical access hospital	0.03	0.03	0.03	0.00	1.000
Log (household income in county 2009) (Area Resource File)	10.8	10.8	10.8	0.0	0.340
Medicare Advantage penetration rate in 2009 (Area Resource File)	39	39	48	9	0.000*
Located in a medically underserved area (2009 HRSA data)	18	22	9	-13	0.090*
Percentage of county that is urban (2009 Area Resource File)	80	80	83	3	0.270
Characteristics of beneficiaries attributed to practices between May 2010 and April 2012					
Count of attributed Medicare beneficiaries[a]	806	682	707	24	0.860
Log (number of attributed Medicare beneficiaries)	6.27	6.10	6.26	0.16	0.330
Percentage of the practice's patients who are dually eligible for Medicaid	18	19	19	0	0.970
Percentage male	44	45	43	-1	0.250
Percentage age 50 to 64	14	15	16	1	0.530
Percentage age 65 to 74	44	43	43	0	0.890
Percentage age 75 to 84	26	25	24	-1	0.460
Percentage age 85 or older	10	10	11	1	0.390
Percentage white	94.4	95.0	93.2	-1.8	0.169
Percentage black	1.3	1.2	2.4	1.2	0.264
Percentage Asian	1.3	1.1	1.3	0.2	0.443
Percentage Native American	0.6	0.6	0.6	0.0	0.785
Percentage Hispanic	0.6	0.6	0.8	0.2	0.210

Table D.11. (*continued*)

Variable name	Potential comparison group mean	Selected comparison group mean	CPC group mean	Difference between means of CPC and selected comparison group	*p*-value
Percentage other	1.5	1.3	1.5	0.2	0.284
Percentage unknown race	0.2	0.2	0.3	0.0	0.734
HCC score–mean	1.00	0.99	0.97	-0.01	0.680
Original Medicare entitlement reason is age	79	77	77	0	0.970
Percentage of beneficiaries with diabetes	26	26	24	-2	0.070*
Percentage of beneficiaries with cancer	9	8	8	0	0.990
Percentage of beneficiaries with chronic obstructive pulmonary disease	10	10	9	-1	0.140
Percentage of beneficiaries with chronic kidney disease	15	15	15	0	0.600
Percentage of beneficiaries with Alzheimer's disease	9	9	9	0	0.850
Percentage of beneficiaries with congestive heart failure	12	12	12	0	0.650
Annualized Medicare expenditures and service use January 2010 through February 2012 among beneficiaries attributed between May 2010 and April 2012					
Inpatient hospital visits–mean	0.22	0.21	0.21	0.00	0.880
Emergency department visits–mean	0.58	0.58	0.58	0.00	0.950
Number of physician services received–mean	21.19	21.53	20.21	-1.33	0.050*
Log of total Medicare expenditures–mean	8.78	8.77	8.75	-0.02	0.630
Average total Medicare Part A and B expenditures[a]	6,841	6,575	6,416	-160	0.570

[a] We include this version of the measure for descriptive purposes, but it was not included in the Chi-square test reported on Table D.12.

*Indicates *p*-value for difference between CPC practices and selected comparison practices is less than 0.1.

EHR = electronic health record; NCQA = National Committee for Quality Assurance; MD = medical doctor; NP = nurse practitioner; PA = physician assistant; HRSA = Health Resources and Services Administration; HCC = hierarchical condition category.

Table D.12. Matching details and diagnostics

	Arkansas	New York (Capital District–Hudson Valley)	Oregon	Colorado	New Jersey	Ohio/Kentucky (Cincinnati–Dayton)	Oklahoma (Greater Tulsa)
Matching details and diagnostics							
Chi-squared statistic	35	40	38	32	42	25	30
Chi-squared *p*-value	0.454	0.267	0.321	0.570	0.187	0.859	0.672
Number of matched sets in which the ratio of CPC practices to matched comparison practices is:							
3:1	0	0	11	0	0	0	0
2:1	12	21	1	19	19	22	14
1:1	17	18	12	17	18	5	19
1:2	0	1	0	1	0	1	1
1:3	0	1	0	1	0	0	0
1:4	1	2	1	0	2	4	0
1:5	27	10	19	17	12	21	20
Number of potential external comparison region practice sites	870	482	846	684	771	1,401	410
Number of potential internal comparison region practice sites	32	26	61	67	96	75	32
Number of CPC practices	69	74	67	74	70	75	68
Number of matched comparison practices from external region	143	87	76	85	46	114	107
Number of matched comparison practices from internal region	25	15	47	41	59	36	28
Total CPC and comparison practice sites (unweighted)	**237**	**176**	**190**	**222**	**175**	**225**	**203**
Total CPC and comparison practice sites (weighted)	**138**	**148**	**134**	**148**	**140**	**150**	**136**

Our approach achieved comparison groups in each region that have similar characteristics to the CPC groups. Some differences in individual characteristics are statistically significant due to the large sample sizes and small variance across practices, but are small in magnitude. Others, most often the Medicare Advantage penetration rate and the income of the county, show slightly bigger differences, most likely reflecting the different regions. Our planned use of regression analyses to estimate program effects should be sufficient to control for the influence of any of these modest remaining differences between the CPC and comparison groups.

APPENDIX E:

IMPACTS METHODS: MODEL ESTIMATION, SAMPLE, AND MEASURES SPECIFICATION

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This appendix describes the estimation approach, analysis sample, and outcome measures used in the impact analysis. Our analytic approach for claims-based measures uses difference-in-differences (DD) regressions to compare trends in outcomes over time before CPC (that is, the pre-period) and after CPC (the post-period, or the time after CPC began) for the patients attributed to CPC practices and those attributed to comparison practices. DD models net out any pre-existing differences between CPC and comparison practices at baseline that were not accounted for by propensity-score matching—provided they would not have changed over time in the absence of CPC. Hence, the DD analysis together with propensity-score matching should help eliminate biases due to unobserved differences in practice characteristics that do not change over time.

In the third annual report to CMS, we estimate annual impacts separately for the first three years of CPC. Here, we detail our approach to the annual impact analysis. Our quarterly reports to CMS estimate quarterly impacts using a similar approach, but with quarterly instead of annual observations on outcomes.

For the annual impact analysis, we use a DD approach with treatment effects varying by year; that is, we obtain annual impact estimates for each post-intervention year included in the model. Let A_t denote a year for $t = 1, 2, \ldots T_e$ where T_e is the most recent post-intervention year included in the sample. In estimating annual impacts, we include data for beneficiaries in CPC and matched comparison practices for the year immediately preceding the start of CPC and for as many post-intervention years for which data are available for an annual report to CMS (Table E.1).

Table E.1. Time period (year) definitions for the annual impact analysis: an illustration up to the third post-intervention year

Calendar period	Description	Time period (*t*) in the regression model
October 2011–September 2012	Pre-intervention year	1
October 2012–September 2013	First post-intervention year	2
October 2013–September 2014	Second post-intervention year	3
October 2014–September 2015	Third post-intervention year	4

Note: To ensure consistency in the impact analysis, we assume an October 2012 start date for all CPC regions, although the intervention actually started in November 2012 for five CPC regions: New York's Capital District–Hudson Valley region, New Jersey, Colorado, Oregon, and Ohio and Kentucky's Cincinnati–Dayton region.

All four pre-intervention quarters, that is, the year immediately preceding the start of CPC, serve as the reference or omitted category for obtaining the DD impact estimates; that is, the impact estimate in any post-intervention year is the CPC-comparison difference in an outcome in the post-intervention year minus the average CPC-comparison difference across the pre-intervention year. Our main estimation approach, therefore, relies on using a separate time dummy for each post-intervention year and its interactions with the treatment (CPC) indicator (Equation [1]).

$$(1)\quad Y_{ijt} = \alpha + \beta.X_{ij} + \mu.P_j + \tau.treatment_j + \sum_{t=2}^{T_e} \gamma_t.A_t + \sum_{t=2}^{T_e} \theta_t.treatment_j.A_t + \varepsilon_{ijt}$$

where:

- Y = outcome variable for patient i, in practice j, in year t.
- X = vector of patient-level controls measured in the pre-intervention period, such as demographics (age categories, race categories, gender), variables capturing Medicare and Medicaid eligibility (original reason for Medicare eligibility, dual status), and hierarchical condition category (HCC) score.
- P = vector of practice-level controls measured in the pre-intervention period. It includes practice characteristics such as patient-centered medical home status; whether any clinicians in a practice meet CMS's meaningful use criteria for EHRs; practice size categories, as measured by the number of clinicians (physicians, nurse practitioners, and physician assistants); having multiple specialties; ownership by a larger organization; and characteristics of the county where the practice is located, including the Medicare Advantage penetration rate, median household income, percentage urban, and status as a medically underserved area (MUA).
- $treatment$ = binary indicator of treatment status or of being in a CPC practice.
- A_t = year (time) indicators, going from the first post-intervention year in the data ($t = 2$) to the last post-intervention year ($t = T_e$) included in the model, with the pre-intervention year ($t = 1$) serving as the reference category. The coefficients in these year dummies capture changes experienced by the comparison group in each post-intervention year relative to the pre-intervention year. Note that instead of using a linear time trend, the use of year dummies allows for a more flexible specification where no assumption of linearity is imposed.
- ε_{ijt} = the idiosyncratic error term.

The model, therefore, separately estimates a coefficient on the treatment indicator (τ), which is the CPC-comparison difference in an outcome in the pre-intervention year, coefficients on the time dummies (γ_t) capturing post-intervention changes in the comparison group over time, and the DD impact estimates—that is, the coefficients on the $treatment.A_t$ interactions we explain in the next subsection. Thus, we are essentially measuring impacts as the (regression-adjusted) change in outcomes in a post-intervention year relative to the pre-intervention year for the treatment group patients minus changes in outcomes for patients of the matched comparison practices for the same post-intervention year.

A. Interpretation of the interaction terms in the equation

The set of interaction terms ($\theta_t.treatment_j.A_t$) captures CPC-comparison differences for each post-intervention year relative to the average treatment-comparison difference in the pre-intervention year. The term θ_t indicates the year-specific impact estimates that capture whether the intervention made a difference to an outcome of interest during the post-intervention period.[7] By estimating Equation (1) for the annual impact analysis, we obtain DD estimates for each year of CPC as well as predicted means for pre- and post-intervention periods, by treatment status. Table E.2 shows how the regression-adjusted CPC and comparison means and DD impact estimates are obtained from Equation (1) for the pre-intervention year and for each post-intervention year. These impact estimates and adjusted means, by treatment status, are presented in the annual reports to CMS.[8] The example below applies to a linear regression model. For non-linear regressions, we use post-estimation predictions to estimate marginal effects and DD estimates on the natural scale.

Table E.2. CPC and comparison group means for outcomes based on the DD analysis in Equation (1): a stylized representation

Year	Comparison group mean	CPC group mean	Difference in CPC-comparison means	DD impact estimate
Pre-intervention year [reference period]	α	$\alpha+\tau$	τ	N/A
First post-intervention year (A_2)	$\alpha+\gamma_2$	$\alpha+\tau+\gamma_2+\theta_2$	$\tau+\theta_2$	θ_2
Second post-intervention year (A_3)	$\alpha+\gamma_3$	$\alpha+\tau+\gamma_3+\theta_3$	$\tau+\theta_3$	θ_3
Third post-intervention year (A_4)	$\alpha+\gamma_4$	$\alpha+\tau+\gamma_4+\theta_4$	$\tau+\theta_4$	θ_4

Note: To highlight the key coefficients in the equation above, we exclude the coefficients on beneficiary characteristics and the practice characteristics in the expressions for the CPC and comparison group means in this table, especially because they are differenced out from the final DD estimates.

DD = difference in differences.

B. Control variables in the model

The model controls for both patient and practice characteristics measured at baseline—that is, before the start of CPC (Table E.3).

[7] As we explain below, we follow an *intent-to-treat* approach and hold patients' attribution status fixed at the first practice they are attributed to in the post-intervention period. This method applies to both treatment and comparison patients, unless the patients die, lose Medicare FFS eligibility, or move out of the CPC region, in which cases we stop following them. Also, for patients initially attributed to matched comparison practices, a change in attribution from a comparison to a treatment practice is incorporated in the sample beginning with the quarter in which that switch happens. We detail this situation in Section D.

[8] In a separate specification, we also estimate the average impact over the entire post-intervention period by including a single time dummy for all post-intervention years together and its interaction with the treatment indicator.

Controlling for the same practice characteristics that were used in matching CPC and comparison practices at baseline ensures that any remaining imbalance in those matching variables was accounted for in generating the DD impact estimates. Note, however, that we cannot control for inherent, unmeasured differences between the CPC and matched comparison practices or account for practice characteristics that vary over time if those characteristics are potentially affected by the intervention.

Table E.3. Patient- and practice-level control variables for the DD regressions

Domain	Variables
Patient-level control variables measured before the start of CPC	

Demographics	Age categories
	  <65 (reference category)
	  65–74
	  75–84
	  ≥85
	Race categories
	  White (reference category)
	  Black
	  American Indian/Alaskan native
	  Other
	Gender (binary indicator for male)

Original reason for Medicare eligibility	Eligibility categories
	  Age (reference category)
	  Disability only
	  ESRD only or ESRD with disability

Dual eligibility	Indicator for dual status (whether enrolled in Medicaid)
Risk score	HCC score (continuous variable, based on 2012 scores for post-intervention years and on 2011 scores for the pre-intervention year; missing score imputed using the average HCC score) Indicator for whether HCC score was imputed
Practice-level control variables measured before the start of CPC	

Characteristics of the practice	Clinician (physician or NP/PA) count categories
	  One
	  Two to three
	  Four to five
	  Six or more
	Has NCQA or state medical home recognition (binary indicator)
	Presence of any clinician in the practice who meets CMS's criteria for meaningful use of EHRs (binary indicator)
	Having multiple specialties (binary indicator)
	Ownership by a medical group or health system (binary indicator)

Characteristics of the practice's county	Medicare Advantage penetration rate (continuous) Median household income (continuous) Percentage urban (continuous) Whether in an MUA (binary indicator)

DD = difference in differences; EHR = electronic health record; ESRD = end-stage renal disease; HCC = hierarchical condition category; MUA = medically underserved area; NCQA = National Committee for Quality Assurance; NP = nurse practitioner; PA = physician assistant.

We estimate the equations above separately for each outcome of interest, accounting for the clustering of standard errors at the practice level. The same model is used for obtaining both region-specific and pooled impact estimates across all seven CPC regions. For estimating differential impacts for subgroups of patients defined by risk quartiles based on HCC score, we estimate separate models for patients in each risk quartile, especially those in the highest risk quartile.

For Medicare expenditures with and without care management fees and for the continuity of care measures (described in Section E), we estimate a linear regression. For the service utilization outcomes (hospitalizations, emergency department [ED] visits, ambulatory care-sensitive conditions [ACSC] admissions, physician visits), which are measured as utilization counts per 1,000 beneficiaries per year, we use maximum likelihood models that are appropriate for count variables. Specifically, to account for overdispersion in utilization counts, we use negative binomial models for utilization outcomes such as physician visits, and to account for both overdispersion and the large percentage of zeroes (beneficiaries with no utilization during a year), we use a zero-inflated negative binomial model for service utilization outcomes that have a large percentage of zeroes, such as hospitalizations and ED visits.[9] For modeling the likelihood of an unplanned readmission within 30 days following a discharge, the likelihood of a follow-up visit within 14 days of a discharge, and the likelihood of an ED revisit within 30 days of an outpatient ED visit, we use separate logistic regressions.[10] We also use logistic regressions for the binary quality-of-care measures for patients with diabetes and ischemic heart disease included in the annual analysis.

All regressions control for patient characteristics in the pre-intervention period, such as demographics (age categories, race categories, gender), variables capturing Medicare and Medicaid eligibility (original reason for Medicare eligibility, dual status), and HCC score. In addition, in the readmission and follow-up visit equations, we control for certain discharge-level factors—specifically, indicators for 31 condition categories identified in inpatient episodes of care during the 12 months prior to the index admission as well as those indicators present at admission. We do not control for diagnoses that may have been a complication of care during the index admission. We also control for indicators for the specialty cohort to which the principal diagnosis or procedure associated with the index discharge belonged. The four cohorts for which we include indicator variables in the model, with one serving as the reference category, are

[9] The zero-inflated negative binomial model relies on the assumption that the excessive zeroes are generated by a separate process from the count values, and they can be independently modeled using a binary outcome model, such as a logit model.

[10] Medicare readmission rate calculations on the Hospital Compare website by CMS have in the past included all readmissions, not just unplanned readmissions. However, in the future, the site will report only unplanned readmissions.

(1) medicine, (2) surgery, (3) cardiorespiratory or cardiovascular, and (4) neurology.[11] For the ED revisit model, which is estimated at the patient level, we additionally control for 24 baseline chronic condition indicators, defined by applying the claims-based Chronic Conditions Warehouse algorithm on Medicare claims. As mentioned above, standard errors are adjusted for practice-level clustering in all models.

C. Weighting

For each patient in each year, we calculate fractional eligibility weights that capture the share of months eligible during the year, defined as months alive and enrolled in Part A and Part B Medicare with Medicare as primary payer and months not in a Medicare health maintenance organization (HMO) or Medicare Advantage. For patients in the comparison group, the eligibility weight is multiplied by a practice-level matching weight to obtain a composite final weight. This matching weight for each comparison group practice is obtained by multiplying the base practice-level matching weight, which adjusts for the number of comparison practices matched to each CPC practice, by the ratio of the average number of CPC patients in the matched set to the number of patients in that comparison practice, based on baseline attribution. Constructing a practice-level matching weight in this manner ensures that the weighted number of CPC patients in a matched set is equal to the weighted number of comparison patients across all comparison practices in that same matched set. For patients in the CPC group, only the eligibility weight is needed, because the matching weight is one. Regressions that have a continuous, claims-based measure as the dependent variable incorporate these final composite weights for CPC and comparison patients in each year. Binary outcome measures in the annual impact analysis, such as quality-of-care outcomes for patients with diabetes or ischemic heart disease, incorporate only the matching weight. Similarly, the regressions for the likelihood of readmission and for the likelihood of 14-day follow-up visits, which are at the discharge level with each index discharge having a 30-day or 14-day follow-up or exposure period, incorporate only the matching weight. (The same applies for the regression for ED revisit that is estimated at the patient level.)

D. Patient sample

We base our analysis on an intent-to-treat approach applied to the quarterly lists of patients attributed to CPC and comparison practices; that is, any patients who are attributed to a practice (CPC or comparison) during any of the post-intervention quarters (or year) remain in our sample during all subsequent post-intervention quarters (or years), as long as they meet the eligibility criteria (alive and enrolled in Part A and Part B Medicare with Medicare as the primary payer and not in an HMO). The patient sample for the annual analysis is simply an aggregate of the quarterly samples for the pre- and post-intervention periods. For instance, any patient who appears in the sample for one or more post-intervention quarters in the quarterly analysis is

[11] The 31 condition categories include a range of diagnoses or risk factors, such as severe infection, metastatic cancer/acute leukemia, diabetes mellitus, end-stage liver disease, drug and alcohol disorders, congestive heart failure, chronic obstructive pulmonary disease, ulcers, cardiorespiratory failure or cardiorespiratory shock, acute renal failure, transplants, hip fracture/dislocation, and more. We base our approach on reviewing standard models in the literature for risk-adjusting the likelihood of readmission, although it differs from other models in that we do not estimate a separate readmission equation for each specialty cohort, given our goal of estimating the impact of the intervention on the risk of unplanned readmission versus estimating a risk-adjusted readmission rate for each cohort.

included in the samples for both the pre- and post-intervention years in the annual analysis. We follow outcomes in the annual analysis from the month corresponding to the first quarter of Medicare eligibility in the pre-intervention period and from the month corresponding to the first quarter of attribution in the post-intervention period.

During the post-intervention period, the sample changes slightly from one year to another as new patients are attributed to practices and some previously attributed patients drop out due to death, joining a Medicare Advantage plan, or losing Medicare eligibility. Also, this approach accommodates the possibility of patients switching practices during the post-intervention period, with clear criteria for dealing with specific cases, based on the intent-to-treat analysis approach. We describe these criteria below.

For patients initially attributed to CPC practices, we follow an intent-to-treat rule of once in treatment, always in treatment, until the end of the initiative, unless the patient dies, loses Medicare fee-for-service (FFS) eligibility, or moves out of the CPC region, in which cases we will stop following that patient. For example, if patients are attributed to a CPC practice in the first two program quarters but are attributed to a matched comparison practice in the third program quarter, we continue to keep them aligned with the CPC practice they were originally attributed to in subsequent quarters and years, as long as they meet the Medicare enrollment criteria. Similarly, patients who were attributed to a CPC practice in the first two program quarters but not attributed to either a CPC or a comparison practice from the third program quarter onward continue to be in our CPC group sample for all subsequent program quarters or years, and aligned with the same CPC practice they were originally attributed to, as long as they are alive, enrolled in Medicare FFS, and in the same CPC region. If patients switch from one CPC practice to another CPC practice, we once again hold their attribution status fixed at the first CPC practice to which they were attributed. In contrast, if patients die, lose Medicare FFS eligibility, or move out of a CPC region without being attributed to any other practice, we truncate their observation at the end of the last year when they met all eligibility criteria.

For patients attributed to matched comparison practices, we incorporate a change in attribution from a comparison to a CPC practice in the sample beginning with the year in which that switch occurs. Finally, for patients who switch from one comparison practice to another comparison practice or from a comparison practice to not being attributed, we hold attribution status fixed at the comparison practice where the patients were originally attributed (as in the case of CPC patients), as long as they are alive, enrolled in Medicare FFS, and in the same comparison region.

We do not run attribution separately for the *pre-intervention* period. Instead, we look back to them for the same sample of patients who were attributed during the post-intervention periods. For instance, if for a particular annual report, we have data for two post-intervention years, the sample of patients during the pre-intervention year is an aggregate of *all* patients attributed to CPC or matched comparison practices during the post-intervention years. Patients' practice affiliation during the pre-intervention year is based on their actual practice affiliation (the practice to which they were first attributed) during the demonstration period, as long as they were eligible for Medicare in the pre-intervention period. Hence, the sample of patients during the pre-intervention year is composed of all CPC and comparison beneficiaries attributed to practices during the post-intervention period, up to the most recent post-intervention year

included in the model, and limited to those who were also enrolled in Medicare FFS during the pre-intervention year.

We prefer this approach of creating the baseline sample of patients for the pre-intervention year based on patient assignments during the post-intervention years. It avoids the costly and time-intensive option of replicating the attribution algorithm for both CPC and matched comparison practices during each of the four pre-intervention quarters we include in our model, and it allows us to follow a similar set of patients over time from the pre-intervention to the post-intervention periods.

A potential issue in defining the pre-intervention sample using the cumulative patient samples from the post-intervention period is that Medicare expenditures register an upward shift in the post-intervention years due to the well-documented high average expenditures during the last six months before death. Because the patient sample in the pre-intervention year is composed of patients who are actually attributed during the post-intervention period, no deaths occur during the pre-intervention period. Consequently, average expenditures are lower during the pre-intervention year. Note, however, that this finding is unlikely to be a major concern, because any increase in expenditures due to high end-of-life costs are likely to occur for both the CPC and comparison patients, unless the intervention has a significant impact on lowering mortality or improving survival among CPC group patients, which should be reflected in the expenditure impact estimates. The DD estimates for the impact of the initiative should remain valid.

E. Measures specification

In this section, we define the key measures used in this report. Table E.4 shows which measures we used in the annual impact analysis.

Table E.4. Medicare claims-based outcome measures for the third annual report to CMS

Medicare expenditures and service use
Total Medicare expenditures (with and without care management fees) PBPM
Total Medicare expenditures, by service category (inpatient, outpatient, physician, DME, SNF, home health, hospice) PBPM
Physician expenditures, by PCP versus specialist visits (subcategory of physician expenditures) PBPM
Number of hospitalizations per 1,000 beneficiaries per year
Number of ED visits per 1,000 beneficiaries per year
Number of outpatient ED visits per 1,000 beneficiaries per year
Number of observation stays per 1,000 beneficiaries per year
Number of PCP visits (total and office-based) per 1,000 beneficiaries per year
Number of specialist visits per 1,000 beneficiaries per year
Diabetes quality of care—lipid testing (yes/no)
Diabetes quality of care—HbA1c testing (yes/no)
Diabetes quality of care—eye exam (yes/no)
Diabetes quality of care—urine protein testing (yes/no)
Diabetes quality of care—all four tests received (yes/no)
Diabetes quality of care—none of the four tests received (yes/no)
Ischemic heart disease quality of care—lipid testing (yes/no)

Medicare expenditures and service use
Continuity of care measures
Continuity of care: percentage of primary care visits at attributed practice
Continuity of care: percentage of all office visits at attributed practice
Continuity of care: Bice-Boxerman Index based on primary care visits
Continuity of care: Bice-Boxerman Index based on all office visits
Quality-of-care outcome measures
Number of ACSC admissions per 1,000 beneficiaries per year
Likelihood of an unplanned readmission within 30 days of a hospital discharge
Likelihood of a follow-up visit within 14 days of a hospital discharge
Likelihood of an ED revisit within 30 days of an outpatient ED visit

DME = durable medical equipment; ED = emergency department; SNF = skilled nursing facility; PCP = primary care physician; PBPM = per beneficiary per month.

- **Medicare FFS expenditures per month for all services (excluding Part D prescription drugs) this reporting period excluding care management fees.** Total FFS Medicare expenditures per month for Part A and Part B covered services during a pre- or post-intervention year. The expenditure measure includes Medicare payments only, excluding third-party and beneficiary liability payments.
- **Medicare FFS expenditures per month for all services (excluding Part D prescription drugs) this reporting period, including care management fees.** Total FFS Medicare expenditures per month for Part A and Part B covered services plus the CPC Medicare FFS care management fees, which were set to average $20 per beneficiary per month (PBPM) during the first nine quarters of CPC ($8 PBPM in the lowest risk quartile, $11 for beneficiaries in the second risk quartile, $21 for beneficiaries in the third risk quartile, and $40 for beneficiaries in the highest risk quartile), and set to average $15 PBPM beginning January 2015 in quarter 10 ($6, $8, $16, $30 PBPM for beneficiaries in the lowest, second, third, and highest risk quartiles, respectively). The actual average amount paid for the research sample by CMS is less, because some patients are no longer attributed to the practice but are still in the sample.
- **Medicare FFS expenditures per month, by service category**. Total claims-based Medicare expenditures per month broken down by type of Part A or Part B service (inpatient, outpatient, physician, home health, skilled nursing facility [SNF], hospice, and durable medical equipment [DME]).
- **Physician expenditures per month, by type of visit**. Expenditures per month on physician visits in all settings broken down by primary care physician versus specialist visit (for the codes used to define primary and specialist visits, see Tables E.5 and E.6).

Table E.5. Primary care physician health care financing administration specialty codes

01 = General practice	08 = Family practice
11 = Internal medicine	37 = Pediatric medicine
38 = Geriatric medicine	84 = Preventive medicine
50 = Nurse practitioner	97 = Physician assistant
89 = Certified clinical nurse specialist	

Table E.6. Specialty physician health care financing administration specialty codes

02 = General surgery	03 = Allergy/immunology
04 = Otolaryngology	05 = Anesthesiology
06 = Cardiology	07 = Dermatology
10 = Gastroenterology	13 = Neurology
14 = Neurosurgery	16 = Obstetrics/gynecology
18 = Ophthalmology	19 = Oral surgery (dentists only)
20 = Orthopedic surgery	22 = Pathology
24 = Plastic and reconstructive surgery	25 = Physical medicine and rehabilitation
26 = Psychiatry	28 = Colorectal surgery
29 = Pulmonary disease	30 = Diagnostic radiology
33 = Thoracic surgery	34 = Urology
39 = Nephrology	40 = Hand surgery
41 = Optometry	44 = Infectious disease
46 = Endocrinology	48 = Podiatry
66 = Rheumatology	70 = Multispecialty clinic or group practice
76 = Peripheral vascular disease	77 = Vascular surgery
78 = Cardiac surgery	81 = Critical care (intensivists)
82 = Hematology	83 = Hematology/oncology
85 = Maxillofacial surgery	86 = Neuropsychiatry
90 = Medical oncology	91 = Surgical oncology
92 = Radiation oncology	93 = Emergency medicine
98 = Gynecologist/oncologist	

Hospital admissions per 1,000 patients per year. This measure is the annualized hospitalization rate per 1,000 patients of all admissions reported in the inpatient file for that year. Transfers between facilities are counted as a single admission. Multiple claims for acute admissions from traditional acute care and critical access hospitals that represent transfers between hospitals are combined into a single record, so that they count as one admission.

Hospital admissions for ambulatory care-sensitive conditions per 1,000 patients per year. Expenditures on a subset of hospital admissions based on the definition developed by the Agency for Healthcare Research and Quality (AHRQ) of potentially avoidable hospitalizations for ACSCs, defined as conditions for which timely, high-quality outpatient care can often prevent complications or more serious disease. AHRQ originally developed these measures as area-level indicators of adequacy of access to primary care, but we use them only to identify hospitalizations that are potentially preventable based on admission diagnosis codes. Whereas

AHRQ excludes any hospitalizations that involve a transfer to one or more subsequent facilities, we include these stays in our calculation but focus only on the claim for the first facility.

We count patients as having a preventable hospitalization if the diagnosis on their claim is any of the following: diabetes related (short-term complications, long-term complications, uncontrolled diabetes, and rate of lower extremity amputation), congestive heart failure (CHF), chronic obstructive pulmonary disease (COPD) in asthma or older adults, coronary artery disease (CAD; including angina without procedure, hypertension, hospitalization for acute myocardial infarction [AMI], hospitalization for acute stroke, combined AMI or stroke), dehydration, bacterial pneumonia, or urinary tract infection.

ED visits per 1,000 patients per year. This measure is the annualized number of ED visits and observation stays per 1,000 patients. It includes visits that lead to a hospitalization.

Outpatient ED visits. This measure is the annualized number of ED visits and observation stays per 1,000 patients that do not lead to hospitalization. Visits that do not lead to a hospitalization are identified in the outpatient department file using revenue center line items equal to 045X or 0981 (emergency room care), 0762 (treatment or observation room), or 0760 (treatment or observation room—general classification). A visit is counted as an observation stay if it is longer than 8 hours and shorter than 48 hours and has a corresponding current procedural terminology (CPT) code of G0378, hospital observation services per hour. If the procedure code on the line item of the ED claims equals 70000 through 79999 or 80000 through 89999, it is excluded (to exclude claims in which only radiological or pathology/laboratory services were provided).

Observation stays per 1,000 patients per year. This measure is a subset of the outpatient ED visits or ED visits that did not lead to a hospital admission. Specific codes used to identify observation stays are described above.

Number of PCP visits in all settings per 1,000 patients per year. This measure is the number of visits to primary care physicians (defined in Table E.5), including nurse practitioners (NPs), clinical nurse specialists (CNSs), and physician assistants (PAs), as defined by Health Care Financing Administration (HCFA) specialty codes, per 1,000 patients per year.

Number of specialist visits in all settings per 1,000 patients per year. This measure is the number of visits to specialists, as defined by HCFA specialty codes (see Table E.6 for a list of codes), per 1,000 patients per year.

Likelihood of 30-day hospital readmission. For calculating the 30-day readmission rate, we used a slightly different time period definition than for the other measures. We looked at all eligible inpatient discharges during the last month of the previous year and the first 11 months of the current year, and calculated the proportion of these index discharges that were followed by an unplanned hospitalization within 30 days of the discharge.

Eligible index discharges for calculating the readmission rate include index discharges for patients who were enrolled in Medicare FFS, discharged from nonfederal acute care hospitals, alive at the time of discharge, and not transferred to another acute care facility. The eligible index discharges include patients discharged to nonacute care settings. Index discharges do not

include admissions to Prospective Payment System-exempt cancer hospitals, admissions for patients without at least 30 days of postdischarge enrollment in FFS Medicare, admissions for patients discharged against medical advice, admissions for primary psychiatric diagnoses, admissions for rehabilitation, and admissions for medical treatment of cancer. The readmission rate counts all *unplanned* readmissions that arise from acute clinical events requiring urgent rehospitalization within 30 days of discharge.

Likelihood of 14-day follow-up visit after a discharge. We used a similar approach to identify the denominator of index discharges for 14-day follow-up visit as we used for 30-day readmissions, with two notable exceptions: (1) requiring that beneficiaries are also Part B eligible, given the follow-up in an outpatient setting; and (2) looking 14 days out instead of 30 to see whether the beneficiary had a readmission following an index discharge. More specifically, the measure was defined as follows: we included all patients who had an index discharge (with the denominator exceptions noted above) and followed them for 14 days postdischarge to determine whether they had a follow-up visit with a primary care or specialist physician, excluding those who had a readmission during that two-week period. We excluded only discharges followed by a *planned* readmission.

Follow-up clinician office visits were identified using the following evaluation and management (E&M) codes from Part B physician files: 99201–99205; 99211–99215; 99241–99245; 99304–99310, 99315–99316, 99318; 99324–99328; 99334–99337 and 99339–99340; 99341–99345; 99347–99350; 99441–99443; 99374–99380; and the following federally qualified health center revenue center codes: 521–522.

Likelihood of 30-day ED revisit. The ED revisit measure identifies whether an outpatient visit to the emergency department, in which the patient was treated and discharged to home/self-care, was followed by another visit to the ED within 30 days. The measure is defined at the patient level for the pre-intervention year as well as each post-intervention year.

Continuity of care measures. We defined continuity of care measures over a two-year pre- and a two-year post-intervention period—using beneficiaries attributed to CPC and comparison practices in the first program quarter. One measure is based on the proportion of visits made by the beneficiary to the practice he or she was attributed to out of all visits made during a two-year period. We used two variants of this measure:

- **Percentage of primary care visits at attributed practice.** This measure is the proportion of office-based E&M visits to primary care physicians, NPs, PAs, and CNSs at the attributed practice out of all such visits in a year.
- **Percentage of all office visits at attributed practice.** This measure is the proportion of office-based E&M visits to primary care physicians, specialists, and NPs, PAs, and CNSs at the attributed practice out of all such visits in a year.

We constructed a second continuity of care measure, based on applying the principle of the Bice-Boxerman Index (BBI), which is a measure of market concentration. In our case, this measure indicates how concentrated (or dispersed) a patient's visits are across all providers (including the CPC practice treated as a single provider) he or she saw over a time period. For instance, out of a total of 10 visits:

- If he or she made all visits to a single provider, the BBI is 1 (perfect continuity)
- If he or she made one visit to each of 10 providers, the BBI is 0 (zero continuity)
- If he or she made five visits to each of two providers, the BBI is 0.44

We used two variants of this measure: (1) BBI based on primary care visits and (2) BBI based on all office visits.

For all four continuity of care measures, we constructed the total number of office-based E&M primary care physician visits and office-based E&M specialist visits, respectively. We used the primary care and specialty codes listed in Tables E.5 and E.6, respectively, to identify these visits, and the codes listed in Table E.7 to define whether a visit is office-based.

Table E.7. CPT codes to define office-based E&M visits

	Qualifying CPT codes
Office/outpatient visit E&M	99201–99205 99211–99215

Quality-of-care process measures. We used Healthcare Effectiveness Data and Information Set (HEDIS) measures and defined them annually—for the pre-intervention and post-intervention years—using patients attributed to CPC practices over the post-intervention period who had certain chronic conditions, namely diabetes and ischemic vascular disease. We used seven measures:

1. **Diabetes quality of care—lipid testing.** Percentage of patients ages 18–75 who had diabetes and had an LDL-C screening in the year.
2. **Diabetes quality of care—HbA1c testing.** Percentage of patients ages 18–75 who had diabetes and had a hemoglobin A1c test in the year.
3. **Diabetes quality of care—eye exam.** Percentage of patients ages 18–75 who had diabetes and had an eye exam in the year.
4. **Diabetes quality of care—urine protein testing**. Percentage of patients ages 18–75 who had diabetes and had a urine protein testing in the year.
5. **Composite diabetes quality of care–whether a patient had all four tests (all four are equal to one).** Percentage of patients ages 18–75 who had diabetes and had all four exams or tests described in measures (1) through (4).
6. **Composite diabetes quality of care—whether a patient had none of the four tests (all four are equal to zero).** Percentage of patients ages 18–75 who had diabetes and had none of the four exams or tests described in measures (1) through (4).
7. **Ischemic vascular disease (IVD) quality of care—lipid testing.** Percentage of patients 18 and older who had a diagnosis of IVD during the measurement year and the year prior and who had a complete lipid profile during the measurement year.

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APPENDIX F:

SENSITIVITY TESTS

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This appendix reports results from a range of sensitivity tests that we conducted to check the robustness of our key findings from the impact analysis. We implemented four categories of sensitivity tests to check that the estimated impacts on Medicare expenditures without fees from the main difference-in-differences model were robust to changing the estimation strategy or the model specification and to rule out alternative explanations for the findings. The tests focused on different aspects of the analysis: (1) tests of the assumptions underlying the difference-in-differences estimation approach, (2) tests on the composition of the patient sample, (3) tests on the definition of the comparison group, and (4) tests of the robustness of the findings to changing the model specification. As we note in Chapter 7, our sensitivity tests showed remarkable robustness of the results to varying assumptions about modeling, sample composition, and comparison group strategies (Table F.1). Together, these tests helped to rule out the following concerns:

- Difference in pre-CPC trends between CPC and comparison practices leads to changes in impact estimates from switching to a longer (two-year) pre-intervention period
- Change in impacts over time are driven by changes in the composition of the patient sample
- Impact estimates are diluted by the inclusion of CPC practices that withdrew from the initiative
- The impact estimate in Year 3 is weakened by the growing participation of comparison practices in accountable care organizations (ACOs) by the end of Year 2 that contaminates comparison group outcomes
- Using the external comparison practices may introduce bias, because they may not have had the same motivation to transform or have had exposure to the same market factors as CPC practices
- Outcomes for internal comparison practices may be contaminated by spillover effects of CPC

Impact estimates are sensitive to varying the model specification to account for time-invariant practice characteristics (fixed effects) and skewness in the cost distribution, or to remove the influence of high-cost cases and use an alternative specification for the error term.

The only exceptions to this robustness were the following:

- When we used the log of actual Medicare expenditures as the dependent variable, which reduces the effect of high cost cases, the Year 1 CPC-wide estimate was only -1 percent and not statistically significant (compared with -2 percent and statistically significant in our primary analysis), although Year 2 and 3 estimates using a log specification were similar to those using actual (unlogged) expenditures. Because CPC practices prioritize delivering care management to costly patients, we believe that comparing the two groups on the log of costs probably understates the true results of CPC. Because taking the log of costs effectively downweights high-cost cases in the estimated overall group means for CPC and comparison group, it reduces the influence of the higher number of expensive or high-cost patients in the comparison group. This finding leads to a smaller difference in percentages between the two groups. This hypothesis was supported by examination of the differences in the distribution

of costs for CPC and comparison patients, which showed slightly lower proportions of CPC patients in each of the cost categories above the mean. The change due to shifting to the logarithmic form was not due to the effects of a small number of outliers.

- Our analysis that compared CPC practices to all "internal comparison practices"—those within the same region that had applied to CPC but were not selected—showed that CPC had favorable, statistically significant effects in all three years. We examined the internal set of comparison practices because they shared a similar level of motivation as CPC practices to transform, in the sense that they applied to the initiative; internal comparison practices are also subject to the same market factors as CPC practices. However, selected CPC practices might be expected to have better outcomes (including lower Medicare expenditures) than non-CPC practices because CMS chose for the CPC initiative those applicants that it considered to have the most well-developed practice features at the time of application. Thus, the estimated effects based on comparing CPC practices with only the internal comparison practices might be biased toward being more favorable than the true effects of CPC. However, in this sensitivity test, the practice's application score was not statistically significantly related to risk-adjusted Medicare expenditures among attributed Medicare beneficiaries. (CMS assigned the score at the time the practice applied to the initiative and used it to select the "best" practices in terms of meaningful use status [a measure of their health information technology use] and PCMH status.)[12] Thus, we consider the internal comparisons to be a valid counterfactual, especially because the potential for selection bias arising due to their not being selected for CPC is counterbalanced by their unmeasured "willingness to participate"—similar to practices in CPC. In a variation on this sensitivity test, we rematched CPC practices with only those internal comparison practices that had been previously selected using propensity score matching in our primary analysis. Under this approach, we used new weights that account for the fact that CPC practices were compared against only internal comparisons. In this analysis, we did not control for the application score (because we wanted to compare results from an analysis using internal comparisons to an analysis using external comparisons, and the external comparison practices do not have an application score). The results, once again, showed that CPC had larger, more favorable estimated effects in all three years, although only the Year 1 effect was statistically significant. Thus, it is unlikely that the contamination of CPC internal comparison practices (due to spillover of CPC) is muting the overall findings.

[12] CMS selected practices to participate in CPC based in large part on their application score. The score gave a practice as many as 530 points for use of health information technology, as many as 80 points for the percentage of practice revenue from participating payers, as many as 70 points for PCMH recognition, and as many as 35 points for participation in the prior three years in QI or practice transformation activities (for example, QI organization activities, Regional Extension Centers, or local or national learning collaboratives). The application score did not include pre-CPC costs, service use, or patient outcomes. CMS also weighed other factors, such as geographic and patient diversity in its final selections. CMS sometimes selected a lower scoring practice to increase diversity; our regressions controlled for variables related to these factors, as well (such as urbanicity, whether in medically underserved area, and the race of attributed beneficiaries).

- Conversely, we rematched CPC practices with only the matched external comparison practices, defining a new matched comparison group with only external comparisons and a new set of matching weights. Under this approach, the new matching weights account for the fact that CPC practices are being matched and compared against only external comparisons. Results from this analysis with practice-level rematching of CPC to only external comparison practices showed small and statistically insignificant effects in all years, with the direction of the effect being unfavorable in Year 3. This alternative was intended to assess the likelihood of potential confounding due to CPC's possible influence on comparison group practices that were located in the CPC region. Because estimates from this alternative were smaller than those from our main model (and impact estimates were larger when CPC practices were compared with practices within CPC regions rather than compared with practices outside CPC regions), it appears that there is little or no contamination of CPC internal comparison practices (due to spillover of CPC) that is muting the overall findings.

  However, these findings for CPC relative to the matched external comparison practices also point toward the possibility of the external comparison group not constituting a valid counterfactual for examining the impacts of CPC, especially given that the external comparison practices are in different health care markets and did not apply for CPC. We believe the following factors address such concerns. First, before matching CPC and comparison practices, we carefully selected external comparison regions to ensure that regional and health care market characteristics were similar across and CPC and external comparison regions. Second, CPC and comparison practices were well-matched not only on baseline practice characteristics but also on average HCC scores, Medicare expenditures, and service utilization at baseline, ensuring they had access to similar resources and were seeing similar case mix of Medicare beneficiaries prior to the start of the intervention. Finally, our difference-in-differences estimation approach is designed to net out any unobserved, time-invariant differences between the CPC and comparison practices. Although external comparison practices are likely to be a credible comparison group, CPC's emphasis on providing comprehensive primary care and on improving quality may lead to relative increases in expenditures in the short run. (However, if this is the case, it is unclear why we would observe increased costs compared with the external comparison group, but not the internal comparison group.)

- Because the rate of participation in Medicare ACOs grew to 35 percent among comparison practices by 2015 (CPC practices could not participate in the Medicare Shared Savings Program and remain in CPC at the same time), we controlled for the Medicare ACO participation of comparison practices at the end of Year 2 (December 2014). Participation in a Medicare ACO by then did not change the significance of the impact estimate for Medicare expenditures in Year 3, but the direction of the effect changes to being unfavorable. This finding is the opposite of what we would expect if ACO participation of comparison practices were muting CPC's impact. This sensitivity test helps to rule out that concern.

Table F.1. Estimates of the CPC-wide effect on Medicare expenditures without fees under alternative approaches

Approach	Motivation	Year 1 impact estimate ($ PBPM)	Year 2 impact estimate ($ PBPM)	Year 3 impact estimate ($ PBPM)
Main analysis (difference-in-differences ordinary least squares regression model, using one observation for baseline year, where patients attributed to CPC practices in any post-CPC quarter were compared with patients attributed to matched comparison practices drawn from both CPC regions and external regions)		-16**	-10	-2
Varying difference-in-differences approaches				
Use two-year baseline (instead of one year)	Controls for longer pre-period trend	-17***	-10	-3
Varying sample composition				
Follow only patients attributed in quarter 1 (rather than including beneficiaries that were attributed for the first time in later quarters)	Removes any effects that might be due to changes in sample composition over time	-15**	-5	-2
Exclude CPC practices that withdrew from the initiative and their matched comparison practices	Examine whether impacts are diluted by the presence of withdrawn CPC practices in the analysis sample	-13*	-10	-2
Control for ACO participation of matched comparison practices at the end of 2014, so that the DD estimate is now based on CPC practices being compared against matched comparison practices that are not ACOs.	Examine whether the Year 3 impact estimate is weakened due to ACO participation of comparison practices	-	-	7
Varying definition of comparison group				
Using internal comparison group only, compare selected applicants to all nonselected applicants while controlling for CPC application score	Controls for changes in market over time by using only internal market and reduces selection bias by using only applicants and controlling for application score	-16**	-18**	-14*
Using internal comparison group only, compare selected applicants with rematched nonselected applicants	Controls for changes in market over time by using only internal market and reduces selection bias by rematching CPC practices to nonselected applicants only and using a new set of matching weights	-32***	-14	-14
Using external comparison group only, compare CPC practices with rematched external comparison practices	By using only rematched practices from external practices (along with new matching weights), removes potential spillover effects of CPC	-10	-7	6

Approach	Motivation	Year 1 impact estimate ($ PBPM)	Year 2 impact estimate ($ PBPM)	Year 3 impact estimate ($ PBPM)
Varying model specification				
Practice fixed effects	Removes time-invariant unobserved variable bias	-17**	-9	-2
GLM with log link	Handles skewed expenditure distribution	-14**	-13*	-3
Trimmed costs at 98th percentile	Reduces influence of high-cost cases	-11**	-10*	-2
Percentage impacts calculated from main model (not a sensitivity test)	Calculates impacts in percentage terms to be comparable to log cost results	-2%**	-1%	0%
Log costs	Reduces influence of high-cost cases	-1%	-1%	0%
Bayesian estimates	Uses alternative specification for error term to account for non-independence of practices within region (random effects model)	-10	-4	4

*/**/*** Significantly different from zero at the 0.10/0.05/0.01 level, two-tailed test.

GLM = generalized linear model; ACO = accountable care organization; PBPM = per beneficiary per month.

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APPENDIX G:

SYNTHESIS

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Table G.1. Modified PCMH-A domain and item descriptions

Domain	Number of questions	Survey question number and topics	
Continuity of care	2	A2_1	Patient assignment to specific provider, and use of that assignment to schedule and monitor supply and demand
		A2_2	The extent to which patients are encouraged to, and usually see their own provider and practice team
Access to care	3	A2_3	Flexibility of appointment systems for different-length and same-day visits
		A2_4	Asynchronous communication with practice team including patients' preferred mode
		A2_6	Patient after-hours access to a coverage team or the practice, and availability of patient EHR records
Planned care for chronic conditions and preventive care	6	A2_7	Availability and proactive use of patient registries by practice teams
		A2_8	Availability and use of evidence-based guidelines in care
		A2_9	Focus of patient visits on acute and planned care needs
		A2_10	The extent to which evidence-based reminders to providers are specific to the individual patient encounter
		A2_11	Extent of role of nonphysician practice team members in providing clinical care
		A2_12	Extent to which medication reconciliation is occurs regularly and is documented in the patient's medical record
Risk-stratified care management	3	A2_16	Degree to which a standard method or tool to stratify patients by risk level is used and guides care delivery
		A2_17	The provision of clinical care management services for high-risk patients by care managers integrated into the practice team
		A2_18	The availability of registry or panel-level data to assess and manage care for practice populations
Patient and caregiver engagement	6	A2_19	Assessment and incorporation of patient and family preferences in planning and organizing care
		A2_20	How systematically practice teams involve patients in decision making
		A2_21	Extent to which patient comprehension of written and verbal communication is assessed and accomplished
		A2_22	The type of self-management support provided by members of the practice team
		A2_23	How test results and care plans are communicated to patients
		A2_24	The use of feedback from a patient and family caregiver council to guide practice improvements
Coordination of care across the medical neighborhood	10	A2_14	The extent of tracking of patient referrals to specialists
		A2_15	The collaborative development of care plans with patients and families that include self-management and clinical management goals, and are used to guide care
		A2_26	The extent to which referral relationships with a range of specialists are formalized
		A2_27	Availability of behavioral health services for patients
		A2_28	The ease of obtaining referrals for specialty care, hospital care, or supportive community-based resources and exchange of relevant information with other providers before and after the patient visit
		A2_29	Practice staff follow-up with patients following (ED)/hospital visits
		A2_30	How practices link patients to supportive community-based resources
		A2_31	Transmission of patient information when this practice refers patients to hospitals, EDs, and specialists
		A2_32	The timeliness of information received from hospitals and EDs following a patient's visit
		A2_34	The proportion of patients for whom the practice knows the total cost to payers for medical care

Domain	Number of questions	Survey question number and topics	
Continuous improvement driven by data	7	A2_35	Practice's use of quality improvement (QI) activities that are continuous and based on proven improvement strategies
		A2_36	Extent to which QI activities are conducted by practice teams supported by a QI infrastructure with meaningful involvement of patients and their families
		A2_37	The availability of comprehensive performance measures to practice site and individual providers
		A2_38	Availability of feedback reports on patient care experiences, and care processes or outcomes to practice site, individual providers, practice teams, patients, other teams, and external agencies
		A2_39	The availability of staff, resources, and time for QI activities
		A2_40	The extent to which hiring and training processes focus on improving care and creating patient-centered care
		A2_41	The extent to which responsibility for conducting QI activities is shared by staff and is made explicit through protected time to meet and specific resources to engage in QI
Questions not included in the M-PCMH-A domains			
A2_5	Availability of scheduled phone visits or group visits with the physician, physician assistant, nurse practitioner, or nurse		
A2_13	The extent to which practices notify patients of their laboratory and radiology results		
A2_25	The use of shared decision making aids to help patients and providers jointly decide on treatment options		
A2_33	Timely receipt of information about patients after they visit specialists in the community		

Table G.2. Results from bivariate regressions

PCMH-A item description	Mean change BL-Yr3	Coefficients							T-statistic						
		Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits	Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits
Continuity of care															
A2_1 Patient assignment to specific provider, and use of that assignment to schedule and monitor supply and demand	1.408	-0.08%	0.3%	**-5.93%**	0.14%	0.18%	-0.66%	-0.04%	-0.28	0.86	**-2.66**	0.29	0.39	-1.65	-0.26
A2_2 The extent to which patients are encouraged to, and usually see their own provider and practice team	0.757	-0.21%	0.34%	-4.06%	0.26%	-0.03%	-0.25%	-0.03%	-0.70	0.96	-1.82	0.55	-0.06	-0.62	-0.17
Access to care															
A2_6 Patient after-hours access to a coverage team or the practice, and availability of patient EHRs	1.933	-0.38%	-0.33%	-3.31%	-0.31%	-0.80%	-0.39%	-0.11%	-1.35	-0.99	-1.56	-0.69	-1.85	-1.04	-0.73
A2_3 Flexibility of appointment systems for different-length and same-day visits	0.457	0.09%	0.29%	**-7.17%**	**-1.29%**	-0.74%	0.42%	-0.02%	0.23	0.65	**-2.58**	**-2.19**	-1.30	0.84	-0.08
A2_4 Asynchronous communication with practice team including patients' preferred mode	5.712	0.26%	0.04%	-2.66%	-0.14%	-0.18%	0.31%	0.03%	1.12	0.16	-1.52	-0.36	-0.49	1.00	0.27
Planned care for chronic conditions and preventive care															
A2_11 Extent of role of nonphysician practice team members in providing clinical care	1.811	-0.17%	-0.59%	-1.24%	**-1.04%**	-0.25%	0.05%	-0.22%	-0.62	-1.88	-0.63	**-2.50**	-0.61	0.14	-1.51

Table G.2 *(continued)*

PCMH-A item description	Mean change BL-Yr3	Coefficients							T-statistic						
		Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits	Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits
A2_12 Extent to which medication reconciliation occurs regularly and is documented in the patient's medical record	0.876	-0.26%	-0.85%	4.16%	-0.16%	0.34%	0.46%	-0.14%	-0.69	-1.94	1.50	-0.27	0.60	0.92	-0.69
A2_7 Availability and proactive use of patient registries by practice teams	3.665	0.14%	0.15%	**-5.46%**	-0.04%	-0.46%	0.01%	0.1%	0.70	0.63	**-3.67**	-0.14	-1.48	0.03	0.93
A2_8 Availability and use of evidence-based guidelines in care	1.755	0.43%	0.11%	-3.93%	-0.16%	-0.03%	-0.16%	0.08%	1.57	0.35	-1.91	-0.37	-0.07	-0.43	0.50
A2_9 Focus of patient visits on acute and planned care needs	1.570	0.27%	0.07%	-3.62%	-0.22%	-0.02%	-0.42%	-0.02%	0.87	0.20	-1.58	-0.45	-0.04	-1.02	-0.11
A2_10 The extent to which evidence-based reminders to providers are specific to the individual patient encounter	1.901	0.13%	-0.14%	-1.08%	0%	0.03%	0.04%	0.02%	0.56	-0.48	-0.60	0.00	0.08	0.13	0.15
Risk-stratified care management															
A2_17 The provision of clinical care management services for high-risk patients by care managers integrated into the practice team	5.843	0.04%	-0.05%	0.07%	0.04%	0.35%	-0.07%	0.06%	0.19	-0.20	0.04	0.13	1.15	-0.26	0.59
A2_16 Degree to which a standard method or tool to stratify patients by risk level is used and guides care delivery	6.769	0.42%	0.16%	-0.01%	-0.06%	0.54%	-0.26%	0.19%	1.66	0.56	-0.01	-0.16	1.42	-0.76	1.40

Table G.2 *(continued)*

PCMH-A item description	Mean change BL-Yr3	Coefficients							T-statistic						
		Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits	Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits
A2_18 The availability of registry or panel-level data to assess and manage care for practice populations	3.664	0.33%	0.27%	**-3.77%**	-0.04%	-0.26%	0.21%	0.14%	1.53	1.06	**-2.34**	-0.13	-0.78	0.73	1.15
Patient and caregiver engagement															
A2_19 Assessment and incorporation of patient and family preferences in planning and organizing care	1.984	0.02%	-0.06%	-1.87%	0.04%	0.33%	-0.45%	0%	0.07	-0.20	-1.04	0.09	0.91	-1.41	0.04
A2_20 How systematically practice teams involve patients in decision making	1.960	0.12%	-0.26%	-1%	-0.82%	*0.89%*	-0.07%	-0.08%	0.44	-0.81	-0.48	-1.88	*2.12*	-0.18	-0.55
A2_22 The type of self-management support provided by members of the practice team	2.750	-0.15%	0.01%	-2.03%	-0.53%	-0.01%	-0.06%	-0.14%	-0.60	0.03	-1.11	-1.36	-0.04	-0.18	-1.09
A2_21 Extent to w hich patient comprehension of w ritten and verbal communication is assessed and accomplished	1.492	0.11%	0.1%	0.1%	-0.2%	0.18%	-0.05%	-0.13%	0.48	0.37	0.06	-0.55	0.51	-0.15	-1.03
A2_23 How test results and care plans are communicated to patients	1.270	-0.59%	**-1.04%**	-2.25%	-0.24%	0.51%	0.19%	**-0.47%**	-1.73	**-2.62**	-0.89	-0.45	0.99	0.41	**-2.60**
A2_24 The use of feedback from a patient and family caregiver council to guide practice improvements	1.383	-0.05%	**-0.46%**	-1.07%	0.18%	0.14%	-0.38%	-0.05%	-0.32	**-2.66**	-0.97	0.75	0.62	-1.95	-0.57
Coordination of care across the medical neighborhood															
A2_14 The extent of tracking of patient referrals to specialists	1.450	0.31%	-0.25%	-0.29%	-0.24%	0.42%	-0.46%	0.06%	1.27	-0.87	-0.16	-0.63	1.14	-1.44	0.48

Table G.2 *(continued)*

PCMH-A item description	Mean change BL-Yr3	Coefficients							T-statistic						
		Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits	Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits
A2_26 The extent to which referral relationships with a range of specialists are formalized	-0.557	0.09%	0.08%	1.81%	-0.18%	-0.42%	-0.15%	0.1%	0.46	0.31	1.19	-0.58	-1.36	-0.54	0.96
A2_27 Availability of behavioral health services for patients	1.643	0.11%	-0.25%	1.75%	0.16%	0.22%	*0.72%*	-0.06%	0.48	-0.91	1.02	0.44	0.61	*2.37*	-0.50
A2_29 Practice staff follow-up with patients following ED/hospital visits	3.203	-0.18%	-0.31%	*4.8%*	0.59%	0.11%	-0.44%	-0.19%	-0.72	-1.09	*2.66*	1.55	0.29	-1.37	-1.46
A2_31 Transmission of patient information when this practice refers patients to hospitals, EDs, and specialists	1.400	0.16%	-0.43%	3.69%	0.12%	0.22%	-0.03%	-0.05%	0.49	-1.14	1.57	0.23	0.45	-0.06	-0.27
A2_32 The timeliness of information received from hospitals and EDs following a patient's visit	2.548	-0.01%	-0.01%	-1.41%	0.03%	0.19%	-0.16%	0.08%	-0.03	-0.05	-0.77	0.08	0.50	-0.49	0.61
A2_15 The collaborative development of care plans with patients and families that include self-management and clinical management goals, and are used to guide care	2.586	0.11%	-0.29%	2.56%	0.22%	0.41%	-0.42%	-0.1%	0.47	-1.09	1.52	0.62	1.21	-1.42	-0.81
A2_28 The ease of obtaining referrals for specialty care, hospital care, or supportive community-based resources and exchange of relevant information with other providers before and after patient visit	1.101	-0.18%	-0.2%	-1.67%	-0.21%	0.17%	0.64%	-0.17%	-0.58	-0.56	-0.73	-0.44	0.35	1.56	-1.01

Table G.2 *(continued)*

PCMH-A item description	Mean change BL-Yr3	Coefficients							T-statistic						
		Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits	Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits
A2_30 How practices link patients to supportive community-based resources	2.886	0.4%	0.13%	1.71%	-0.36%	0.39%	-0.51%	0.14%	1.50	0.42	0.85	-0.84	0.94	-1.42	0.94
A2_34 The proportion of patients for w hom the practice know s the total cost to payers for medical care	3.216	-0.47%	-0.28%	0.2%	0.1%	-0.68%	0.44%	-0.23%	-1.96	-0.99	0.11	0.26	-1.88	1.40	-1.77
Continuous improvement driven by data															
A2_36 Extent to w hich QI activities are conducted by practice teams supported by a QI infrastructure with meaningful involvement of patients and their families	2.722	0.29%	-0.04%	-1.79%	**-0.7%**	0.14%	-0.26%	0.09%	1.30	-0.15	-1.09	**-2.04**	0.41	-0.88	0.72
A2_37 The availability of comprehensive performance measures to practice site and individual providers	3.031	0.4%	0.28%	-2.39%	-0.25%	0.28%	0.1%	0.22%	1.74	1.06	-1.41	-0.71	0.80	0.34	1.82
A2_38 Availability of feedback reports on patient care experiences, and care processes or outcomes to practice site, individual providers, practice teams, patients, other teams, and external agencies	3.869	0.14%	0.02%	0.04%	-0.05%	-0.22%	0.14%	0%	0.67	0.08	0.03	-0.14	-0.70	0.53	0.01
A2_39 The availability of staff, resources, and time for QI activities	2.409	-0.12%	-0.17%	-0.97%	**-0.76%**	0.30%	-0.06%	-0.15%	-0.50	-0.61	-0.54	**-2.04**	0.82	-0.17	-1.14

Table G.2 *(continued)*

PCMH-A item description	Mean change BL-Yr3	Coefficients							T-statistic						
		Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits	Medicare expenditures	Hospitalizations	Observation stays	ED outpatient visits	Outpatient expenditures	Primary care physician visits	Specialist visits
A2_41 The extent to which responsibility for conducting QI activities is shared by staff and is made explicit through protected time to meet and specific resources to engage in QI	2.815	-0.11%	-0.1%	-2.07%	-0.5%	0.04%	0.09%	-0.14%	-0.52	-0.40	-1.33	-1.52	0.13	0.31	-1.28
A2_35 Practice's use of QI activities that are continuous and based on proven improvement strategies	2.303	0%	-0.02%	-3%	-0.64%	-0.33%	-0.15%	-0.03%	-0.01	-0.08	-1.59	-1.60	-0.86	-0.43	-0.21
A2_40 The extent to which hiring and training processes focus on improving care and creating patient-centered care	2.047	-0.13%	-0.3%	-0.44%	-0.15%	0.51%	0.05%	0.03%	-0.56	-1.07	-0.25	-0.41	1.42	0.17	0.20
A2_13 The extent to which practices notify patients of their laboratory and radiology results	0.398	0.17%	0.51%	0.37%	**-1.59%**	1.28%	-0.24%	0.41%	0.36	0.90	0.10	**-2.12**	1.75	-0.38	1.58

Source: Medicare claims; 2012 and 2015 CPC practice survey administered October through December 2012 and April through August 2015.

Note: **Green-shaded boxes with bolded text** denote a statistically significant decrease in the outcome as score increases, for a two-tailed test at the 0.05 significance level. *Red-shaded boxes with italicized text* denote a statistically significant increase in the outcome as score increases.

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