

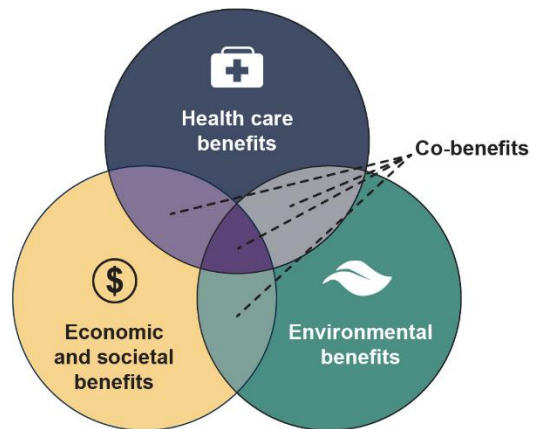
Making the Case for Medicaid to Establish Climate and Extreme Weather Initiatives: The Value of Co-Benefits

How state Medicaid agencies can use co-benefits thinking to demonstrate simultaneous health, environmental, economic, and societal benefits

Medicaid leaders face emerging challenges following the public health emergency, including climate change. The health system is responsible for an estimated [8.5 percent of harmful carbon emissions](#) in the United States, and climate change's negative impacts fall disproportionately on Medicaid beneficiaries. Medicaid has an opportunity to catalyze systemic climate action by using its unique purchasing power and policy levers to create change while [promoting health equity](#). This kind of co-benefits thinking can help Medicaid leaders build support and address the health concerns arising from this crisis.

This brief introduces co-benefits thinking and provides an example of climate action Medicaid can undertake and its co-benefits across the health, economic, societal, and environmental policy areas. Medicaid leaders can use these concepts to gain buy-in from diverse stakeholders when advocating for Medicaid-driven climate action.

Figure 1. Co-benefits of health care, environmental, economic, and societal goals



What are co-benefits?

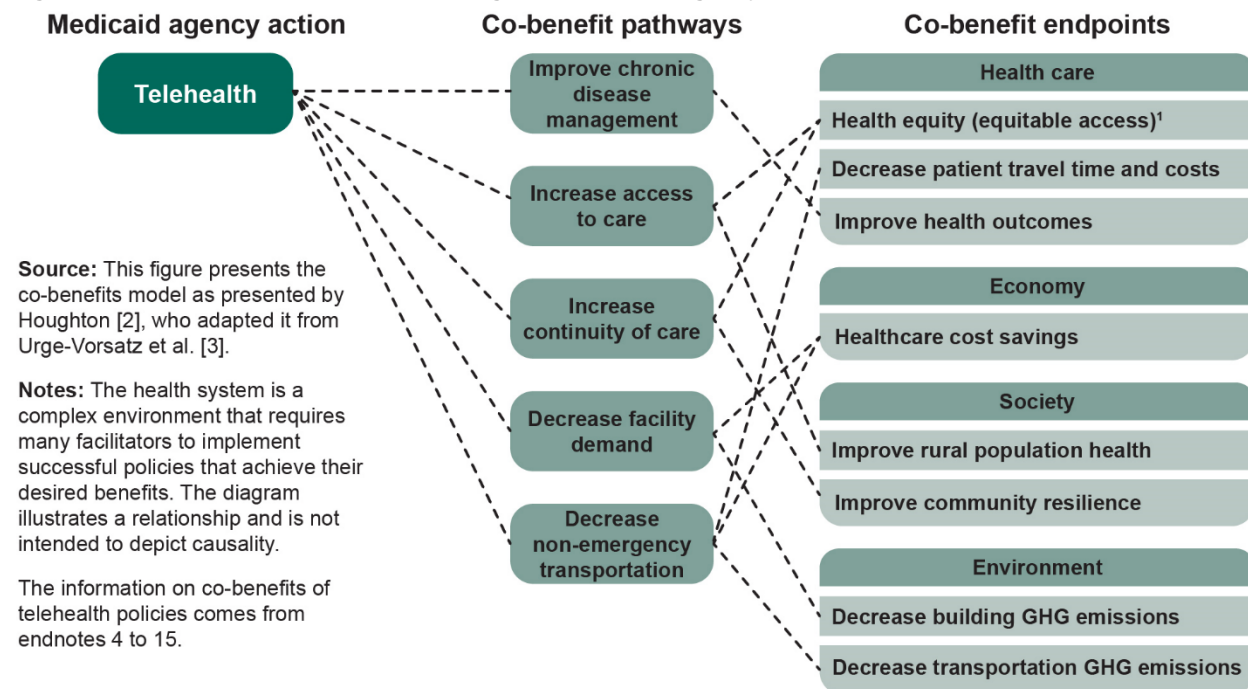
Co-benefits are the positive outcomes that result from actions taken toward a different primary objective that also yield gains in other areas, such as the environment, society, economy, and culture. When policies primarily target the intersection of climate and health, the ripple effects can lead to wide-ranging economic and societal benefits (Figure 1, illustrating various spheres of impact).¹ State Medicaid agencies often face challenges justifying new initiatives because of various constraints, but, by understanding and leveraging co-benefits, agency leaders can not only address primary goals but also build stronger support for their policies and help address climate change's causes and consequences.

Co-benefits of state Medicaid action on health, climate, and society

There are many ways to visualize the co-benefits of a policy action. Figure 2 shows how one action from Medicaid might facilitate several co-benefits across domains, including environmental benefits that influence climate change. The figure can be read from left to right, beginning with the Medicaid agency action, and navigating to the connected co-benefit pathways and their various co-benefit endpoints.

In this diagram, co-benefit pathways represent the direct benefits of a Medicaid agency strategy, and the co-benefit endpoints represent broader benefits. As an example, one direct benefit of promoting telehealth services for Medicaid beneficiaries might be decreased non-emergency transportation. This direct benefit can lead to multiple co-benefit endpoints, including health care cost savings (economic benefit), decreased greenhouse gas emissions from transportation (environmental benefit), and decreased patient travel times and costs (health care benefit).

Figure 2. Illustration of co-benefits thinking for a Medicaid agency action



Source: This figure presents the co-benefits model as presented by Houghton [2], who adapted it from Urge-Vorsatz et al. [3].

Notes: The health system is a complex environment that requires many facilitators to implement successful policies that achieve their desired benefits. The diagram illustrates a relationship and is not intended to depict causality.

The information on co-benefits of telehealth policies comes from endnotes 4 to 15.

Definitions:

Medicaid agency action. Strategies that, if introduced or expanded by state Medicaid agencies, could advance decarbonization or reduce harmful greenhouse gas emissions from the health system.

Co-benefit endpoints. Policy focus areas that Medicaid agency strategies might be able to affect. This section includes subcategories within health, economic, societal, and environmental policy areas showing more specific possible outcomes.

Co-benefit pathways. The direct benefits of a Medicaid agency strategy.

Health care. Benefits primarily of interest to those in the health system, including health care providers, beneficiaries, and state Medicaid agencies. Outcomes in this policy area could include health equity, health care quality, and others.

Economy. Benefits primarily related to state and local economies. Outcomes in this policy area could include cost drivers and factors that strengthen local economies.

Society. Benefits supporting broader society, including those of interest to state political and service bodies. Outcomes in this policy area might include improved infrastructure, changes in energy demand, and job creation.

Environment. Benefits related to the local and broader physical environment. Outcomes in this policy area could include decreasing greenhouse gas emissions, reducing the urban heat island effect, and improving air quality.

Additional opportunities

Medicaid agency leaders can take a similar approach to identifying co-benefits that align with other health-related initiatives and support the reduction of harmful greenhouse gas emissions in the health system. Here, we’ve included some other [climate actions](#), [policy options](#), and co-benefits for Medicaid leaders to consider, though there are many other possibilities.

| Medicaid agency strategies and actions | Example co-benefit pathways | Example co-benefit endpoints |
|---|---|---|
| <p><i>Quality incentive programs</i></p> <ul style="list-style-type: none"> Establish climate change metrics and reporting Incentivize provider climate change survey responses <p><i>Medicaid demonstration waivers (for example, section 1115 demonstration)</i></p> <ul style="list-style-type: none"> Address health-related social needs exacerbated by extreme weather | <ul style="list-style-type: none"> Increase understanding of the current health system’s emissions Catalyze dialog about climate and health metrics Increase awareness of need for climate action in the health system Reduce adverse health impacts of extreme weather on vulnerable populations | <ul style="list-style-type: none"> Measure health system emissions year over year (environment) Increase transparency in the health system (health care) Increase transparency to the community (society) Improve health equity (health care) Decrease emergency health care costs (economy) |

The Medicaid agency strategies are tools the state Medicaid agency can use to catalyze health system decarbonization efforts, which could produce co-benefits. Medicaid leaders can tailor their approach based on their state’s policy context, needs, and priorities. This could mean starting with desired benefits, a decarbonization area of interest, or strategies that are most relevant to their program, and then drawing that priority to the two other areas.

Next steps

State Medicaid leaders can leverage co-benefits thinking to show how policies and strategies can address climate change, along with urgent ongoing priorities in the health system, the economy, society, and our environment. This type of thinking can show the benefits outside of climate change and health to build broader support for climate action across agency leaders, state policymakers, health care providers, and Medicaid beneficiaries. Depending on the audience, Medicaid leaders might choose to focus on communicating the economic, societal, or health benefits before the environmental benefits. Along with [Reducing the Health System’s Greenhouse Gas Emissions: Key Messages to Catalyze Climate Action](#), Medicaid leaders may feel empowered to use the contents of this document, knowledge of their agencies’ programs and priorities, and understanding of their beneficiary’s needs to create their own diagrams and gain buy-in for co-beneficial actions toward climate change and health.

Mathematica is working with the Commonwealth Fund to inspire, inform, catalyze, and equip state Medicaid agencies to become leaders in reducing the amount of greenhouse gases the health system generates. Mathematica synthesized findings from a rapid landscape scan of existing state policies and interviews with state health care leaders. Based on that research, this co-benefits diagram highlights tools that state Medicaid agencies may consider and implement to act on climate change mitigation and safeguard the health of their beneficiaries.

Mitigation refers to actions that foster the reduction of harmful greenhouse gas emissions.

This co-benefits diagram, authored by Mathematica and supported by the Commonwealth Fund, is part of the *Catalyzing State Medicaid Leadership on Climate Change Mitigation* project. Learn more about this project and related products by visiting www.mathematica.org/projects/catalyzing-state-medicare-leadership-on-climate-change-mitigation.

References

- ¹ Smith, K.R., A. Woodward, D. Campbell-Lendrum, D.D. Chadee, Y. Honda, Q. Liu, J.M. Olwoch, B. Revich, and R. Sauerborn. 2014. “Human Health: Impacts, Adaptation, and Co-Benefits.” In *Climate Change 2014: Impacts, Adaptation, and Vulnerability. Part A: Global and Sectoral Aspects. Contribution of Working Group II to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*, edited by , C.B. Field, V.R. Barros, D.J. Dokken, K.J. Mach, M.D. Mastrandrea, T.E. Bilir, M. Chatterjee, K.L. Ebi, Y.O. Estrada, R.C. Genova, B. Girma, E.S. Kissel, A.N. Levy, S. MacCracken, P.R. Mastrandrea, and L.L. White. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA, pp. 709-754. <https://www.ipcc.ch/report/ar5/wg2/human-health-impacts-adaptation-and-co-benefits/>
- ² Houghton A. 2021. “‘Co-Benefits’ As a Lens Through Which COVID-19 Building Upgrades Can Advance Environmental Sustainability, Climate Mitigation and Adaptation, and Social Equity.” *Harvard Public Health Review* 29. <https://doi.org/10.54111/0001/cc4>.
- ³ Ürge-Vorsatz, D., S.T. Herrero, N.K. Dubash, and F. Lecocq. 2014. “Measuring the Co-Benefits of Climate Change Mitigation.” *Annual Review of Environment and Resources* 39: 549–582. <https://doi.org/10.1146/annurev-environ-031312-125456>.
- ⁴ Ortega, Gezzer, Jorge A. Rodriguez, Lydia R. Maurer, Emily E. Witt, Numa Perez, Amanda Reich, and David W. Bates. 2020. “Telemedicine, COVID-19, and Disparities: Policy Implications.” *Health Policy and Technology* 9, no. 3: 368-371. <https://doi.org/10.1016/j.hlpt.2020.08.001>.
- ⁵ Barbosa, W., K. Zhou, E. Waddell, T. Myers, and E.R. Dorsey. 2021. “Improving Access to Care: Telemedicine Across Medical Domains.” *Annual Review of Public Health* 42: 463-481. https://www.annualreviews.org/doi/10.1146/annurev-publhealth-090519-093711#_i16.
- ⁶ Bouley, T., Roschnik, S., Karliner, J., Wilburn, S. Slotterback, S., Guenther, R., Orris, P., Kasper, T., Platzer, B.L., and Kris Torgeson. 2017. “Climate-Smart Healthcare: Low-Carbon and Resilience Strategies for the Health Sector (English).” <http://documents.worldbank.org/curated/en/322251495434571418/Climate-smart-healthcare-low-carbon-and-resilience-strategies-for-the-health-sector>.
- ⁷ Donald, Neil, and Shashi Irukulla. 2022. “Greenhouse Gas Emission Savings in Relation to Telemedicine and Associated Patient Benefits: A Systematic Review.” *Telemedicine and e-Health*: 1555-1563. <http://doi.org/10.1089/tmj.2022.0047>.
- ⁸ Wylie, L., A.M. Corrado, N. Edwards, M. Benlamri, and D.E. Murcia Monroy. 2020. “Reframing Resilience: Strengthening Continuity of Patient Care to Improve the Mental Health of Immigrants and Refugees.” *International Journal of Mental Health Nursing* 29, no. 1: 69-79. <https://doi.org/10.1111/inm.12650>.
- ⁹ Cigna. 2022. “Does Virtual Care Save Money?” <https://newsroom.cigna.com/download/does-virtual-caresave-money.pdf>.
- ¹⁰ U.S. Department of Health and Human Services. 2023. “Funding Opportunities.” Accessed April 26, 2023. <https://telehealth.hhs.gov/funding-opportunities>.
- ¹¹ Pickard Strange, M., A. Booth, M. Akiki, S. Wieringa, and S.E. Shaw. 2023. “The Role of Virtual Consulting in Developing Environmentally Sustainable Health Care: Systematic Literature Review.” *Journal of Medical Internet Research* 25. <https://doi.org/10.2196/44823>.
- ¹² Hawkins, Janice E., Dania Itani Mousa, and Kathleen Eviza. 2023. “Reducing the Carbon Footprint of Our Health Care Systems While Lowering Costs: A-Z”, *Nurse Leader* 21, no. 2: 225-228. <https://doi.org/10.1016/j.mnl.2022.05.004>.
- ¹³ Purohit, A., J. Smith, and A. Hibble. 2021. “Does Telemedicine Reduce the Carbon Footprint of Healthcare? A Systematic Review.” *Future Healthcare Journal* 8, no. 1: 85-91. <https://www.rcpjournals.org/content/futurehosp/8/1/e85>.
- ¹⁴ Dacones, I., C. Cave, G.L. Furie, Cory A. Ogden, and Jonathan E. Slutzman. 2021. “Patient Transport Greenhouse Gas Emissions from Outpatient Care at an Integrated Health Care System in the Northwestern United States, 2015–2020.” *The Journal of Climate Change and Health* 3. <https://connectwithcare.org/wp-content/uploads/2021/07/1-s2.0-S2667278221000225-main.pdf>.
- ¹⁵ Der-Martirosian, C., Chu, K., and Aram Dobalian. 3033 “Use of Telehealth to Improve Access to Care at the United States Department of Veterans Affairs During the 2017 Atlantic Hurricane Season.” *Disaster Medicine and Public Health Preparedness* 17, no. 6. <https://www.cambridge.org/core/journals/disaster-medicine-and-public-health-preparedness/article/abs/use-of-telehealth-to-improve-access-to-care-at-the-united-states-department-of-veterans-affairs-during-the-2017-atlantic-hurricane-season/950E9FBA75F65540CCCBB33C4A697705>.