

Harnessing Data to Inform Initial Medicaid Climate Action

Topline Takeaways

- Newly available tools and a growing collection of online data resources present more opportunities to help Medicaid estimate the potential impacts of climate change on health and budgets.
- Combining national climate data repositories and Medicaid data can offer glimpses into regions and subpopulations most affected by specific climate exposures, like extreme heat or deteriorating air quality.
- Instead of aiming for full integration, agencies can begin by overlaying Medicaid data with descriptive climate risk tools to discern state- and county-level trends, such as heat, flooding, and smoke exposures.

The Challenges

In the wake of 2023's record-setting heat and widespread wildfire smoke emergencies, the implications for health systems and Medicaid beneficiaries and budgets loom large. While published scientific findings specific to Medicaid are currently limited, it's evident that those most vulnerable to climate impacts – older adults, people with disabilities, and those with complex and chronic health conditions – are significantly represented in the Medicaid population. As climate trends continue worsening, state Medicaid programs can proactively harness available data, however preliminary, both to anticipate and manage these adverse effects and to build the case for strategically leveraging their substantial purchasing power and regulatory authority to champion climate action within the health system.

Navigating the climate-health data landscape might seem daunting, especially with the current shortage of Medicaid-specific climate impact studies. However, newly available tools and a growing collection of online data resources present growing opportunities to help estimate potential impacts on beneficiaries and infrastructure, anticipate service demands, and project budgetary implications—bridging the data gap until more definitive studies emerge. Supplementing these data sources with a state's own Medicaid data could be a powerful strategy for generating preliminary actionable insights to inform the pursuit of resilience, adaptation, and mitigation aims. This brief will outline emerging ideas on how to make the most of what's available now, with the goal of safeguarding beneficiaries and budgets while also imagining ways Medicaid could make an impact on decarbonization goals.

Possibilities with Existing Data Sources

National data repositories such as the [National Integrated Heat Health Information System](#), and the [CDC's environmental health tracking](#) site curate an expanding range of data options on climate and health. These tools offer glimpses into regions and subpopulations most affected by specific climate exposures like extreme heat or deteriorating air quality. Harnessing this data could lead to a range of benefits from crafting compelling, data-driven narratives for policymakers and stakeholders about imminent climate-driven health and cost challenges that build the case to decarbonize, to identifying high-risk subgroups who might benefit from targeted interventions. However, there are currently few established approaches for Medicaid agencies to leverage these sources of data for tangible insights. As Medicaid agencies begin navigating this new territory, it will be

imperative to pool lessons learned across states to improve the collective ability of agencies to translate data into real-world positive outcomes for beneficiaries and taxpayers.

A new state- and county-level data tool that specifically addresses the impact of extreme heat on Medicaid populations and budgets is [ClimaWATCH](#) (Climate and Weather Analytics, Trends and Community Health). The dynamic dashboard tool provides statistics and data visualizations that can inform policy and climate action. For example, using North Carolina 2020 data, we can use ClimaWATCH to:

(1) Learn where risk exposures are greatest. The ClimaWATCH tool reveals that counties on the west side of the state experienced zero heatwaves in 2020, likely due to the mountainous geography, compared to 1-6 heatwaves for central and eastern counties.

(2) Explore locales and demographic subgroups at elevated risk of exposure and adverse outcomes. Cross referencing data from the [CDC's Social Vulnerability Index](#), the ClimaWATCH tool shows counties in North Carolina that experienced heatwaves in 2020 had three times the percent minority population compared to counties without heatwaves.

(3) Probe how heatwaves impact utilization and costs across geographies and population. Even though Robeson and Scotland counties both experienced similar numbers of heatwaves and presented with largely comparable social vulnerabilities, Robeson had 73% more beneficiaries using heat-related healthcare services (using an acute composite metric) during heatwave periods compared to 41% in Scotland county.

While Medicaid agencies are adept at using their extensive databases for many purposes, bridging health data with climate risk data is a new frontier. Instead of aiming for full integration, agencies can begin with overlaying Medicaid data with descriptive data from climate risk tools to discern state- and county-level trends, such as heat, flooding, and smoke exposures. When data are combined, borrowing from waiver evaluation methods, like regression discontinuity designs, might provide tentative insights, treating events like wildfires as "interventions" to obtain a crude initial assessment of impacts. Compiling data from different online sources about a variety of climate risk types, from smoke to storms to heat, could create a state and county data snapshot to begin understanding the multifaceted contours of risk facing a given Medicaid program and its beneficiaries. Incorporating carbon accounting and [sustainability-related questions into annual provider or MCO surveys](#) could yield new data that helps identify opportunities for Medicaid to reinforce and elevate attempts to reduce harmful greenhouse gas emissions.

Moving Forward with Data-Driven Policies and Programs

As we confront the urgency of our changing climate, increasingly reflected in headlines, efforts to integrate Medicaid data with climate insights presents a pathway to informing preliminary planning and action. By taking initial steps into data exploration, one can gain both a clearer picture of the challenges at hand and also pave the way for proactive climate resilience, adaptation and mitigation policies and interventions. Each data point gathered, each analysis run, and each policy crafted is a stride towards a healthier, more resilient future for Medicaid beneficiaries, health systems and our broader communities.

This brief, 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-medicaid-leadership-on-climate-change-mitigation.