

Health equity data strategy and applications in Medicaid managed care

Paul Houchens, FSA, MAAA
Penny Edlund, RN, MBA, CPHQ
Libby Bunzli, MPH



While many states have made improving health equity and addressing social determinants of health (SDOH) a top priority, these efforts are likely to have the greatest impact when supported by robust data resources and analysis.

This paper is intended to provide state Medicaid agencies a summary of available data sources that can assist in evaluating health disparities and measuring progress toward health equity goals, as well as potential actions that can be taken through a state's Medicaid managed care program to promote more robust and actionable health equity data. Examples of health equity data applications for managed care programs are also discussed, including a case study using Medicaid quality metrics.

Introduction

The Centers for Disease Control and Prevention (CDC) states, "Health equity is achieved when every person has the opportunity to attain his or her full health potential and no one is disadvantaged from achieving this potential because of social position or other socially determined circumstances."¹ Health inequities can be measured by life span, quality of life, disease prevalence and severity, disability and mortality rates, and treatment access.² The Medicaid program, through its coverage of over 80 million Americans as of January 2022,³ plays a critical role in trying to address health inequities for the country's most vulnerable populations. Because health disparities are rooted in broader social and economic disadvantages, strategies to improve health equity must recognize and address the social determinants of health (SDOH).⁴ As the COVID-19 pandemic enters its third year, many state health and human services agencies are elevating health equity as a priority, to address the pandemic's adverse impact on health disparities.⁵

With national Medicaid and Children's Health Insurance Program (CHIP) managed care expenditures totaling \$310 billion in federal fiscal year (FY) 2019 (nearly half of all Medicaid expenditures)⁶ and covering nearly 70% of all Medicaid members in federal fiscal year 2019,⁷ policies and actions incorporated into Medicaid managed care program design can play a key role in improving health equity, not only for Medicaid beneficiaries but potentially across the entire healthcare system. The Centers for Medicare and Medicaid Services (CMS) recently published a framework for health equity, which highlights expanded and systematic data collection, reporting, and analysis as the first priority, indicating that a deepened understanding of inequities and how they manifest in health outcomes can support individual level interventions as well as informing broader policy approaches.⁸ This paper focuses on data that is the foundation for understanding and addressing health disparities and improving health equity, discussing:

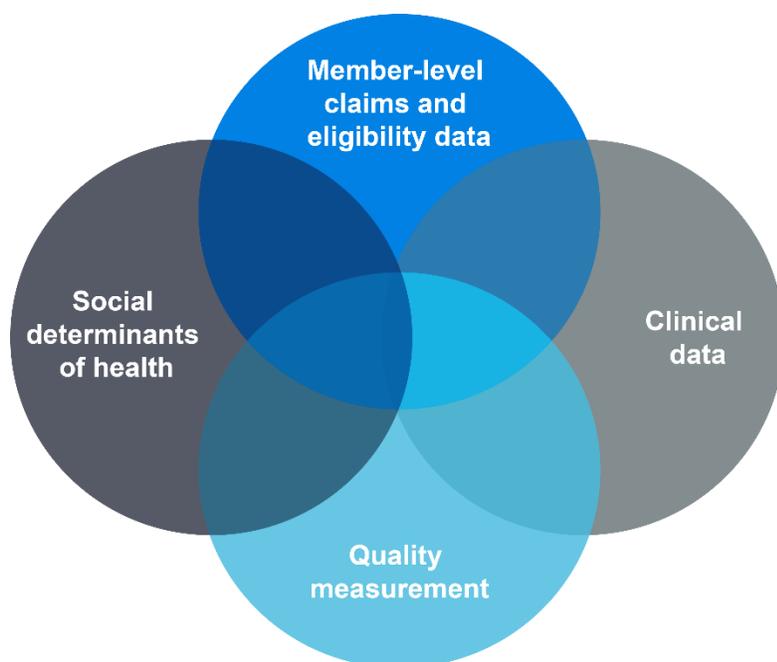
- Necessary data resources to measure health disparities and potentially understand their causes
- Strategies and options for state Medicaid agencies to promote more robust and integrated health equity data in their managed care programs
- Potential applications of health equity-related data to existing Medicaid managed care rate development and quality measurement
- A case study on how integrated health equity data resources could be used to evaluate managed care organization quality metrics

It should be noted that, while data strategies are critical to advancing an equity agenda, they are not the only strategies that states may consider when developing plans to improve equity and address social needs. Enhancing data collection and analysis will also take time to implement, and it may not be advisable for the planning or implementation of equity initiatives to be made contingent upon optimal data collection. State Medicaid programs have other tools that may be used to reduce disparities, for example through expanded eligibility or coverage of new benefits,⁹ which should be considered in parallel with data strategies.

Overview of available data supporting measurement of health disparities and social determinants of health

Data sources supporting measurement of health disparities and health equity goals can be organized among four domains: member-level claims and eligibility data; clinical data; quality measurement; and social determinants of health.

FIGURE 1: FOUR DATA DOMAINS FOR MEASURING HEALTH DISPARITIES AND PROGRESS TOWARD HEALTH EQUITY GOALS



As shown by Figure 1, these four types of data sources are integrated. For example, claims data (also referred to as administrative data) is necessary for developing metrics for many quality measures. Claims data may also contain ICD-10 Z codes that can identify member SDOH needs. Unmet SDOH needs could impact quality metrics by contributing to poor access to healthcare services, utilization that could have been avoided with better ambulatory care, or abnormal utilization and cost trends. The challenge with these four domains is not only collecting the data, but making sure the data can be linked together. For example, is there a member crosswalk between healthcare claims data and person-level data available from other human services agencies?

MEMBER-LEVEL CLAIMS AND ELIGIBILITY DATA

Medicaid fee-for-service and managed care encounter data provide documentation of every covered healthcare service provided to a Medicaid member. When merged with the Medicaid eligibility file, claims data can be used to assess healthcare utilization and cost by member demographics, including age, gender, geography, and race/ethnicity. Diagnosis codes, procedure codes, and prescription drug utilization can be used to identify members with specific clinical conditions. This data is also commonly used in risk adjustment of managed care capitation rates. This data can be used to identify specific healthcare services provided to individual members, but by itself it is unlikely to give visibility into SDOH factors that may have contributed to an individual's given health outcome.

CLINICAL DATA

Clinical data includes patient electronic health records (EHR) that contain laboratory and diagnostic testing results and vaccination records and that provide a view of the patient's care across the healthcare system.¹⁰ The aggregation of EHR data, via a health information exchange (HIE), can be used to analyze more robust clinic data for Medicaid members.¹¹ For example, in *A 10-Year Vision to Achieve an Interoperable Health IT Infrastructure* from the Office of the National Coordinator for Health Information Technology, CMS envisioned that authorized researchers will be able to use HIE and other data to monitor health disparities and quality, with the monitoring of the diabetic population's A1C values.¹² While significant progress has been made in collecting and sharing EHR data in the last decade, stakeholders' attention must now turn to synthesizing and understanding the collected data to improve population health and address health disparities.¹³

QUALITY MEASURES

Standardized measures can assess whether the delivery system is providing care for patients and populations in an optimal manner.¹⁴ Quality measures are commonly used in state Medicaid programs to assess health plan performance (e.g., incentive programs or adjustments to capitation rates), and are featured in the CMS Medicaid State Scorecard.¹⁵ More recently, the use of quality measures by state Medicaid agencies is focused on identifying health disparities by race and ethnicity or geography (rural vs. urban), and to center attention on health equity goals in areas such as child health, maternal health, behavioral health, and chronic conditions.¹⁶ While state-specific quality measures can be employed, many quality measures are standardized, such as those in the Medicaid Child and Adult Core Sets¹⁷ and Healthcare Effectiveness Data and Information Set (HEDIS), giving states a strong foundation for quality measurement.¹⁸

Medicaid managed care organizations (MCOs) are also typically required to conduct an annual Medicaid Consumer Assessment of Healthcare Providers and Systems (CAHPS) survey. The CAHPS survey provides insights into enrollees' and providers' satisfaction with the quality of services provided and their degree of access to healthcare services.¹⁹ An examination of responses to the CAHPS survey, by age, gender, race, and ethnicity, can assess variation in consumer experiences within the Medicaid managed care program.

SOCIAL DETERMINANTS OF HEALTH (SDOH)

SDOH data captures the conditions in the environments where people are born, live, learn, work, play, and worship that impact an individual's health, functioning, and quality-of-life outcomes and risks.²⁰ According to Healthy People 2030, the five key areas of SDOH are:

- Economic stability (e.g., access to steady employment with a living wage)
- Education access and quality (e.g., percentage of adults with a high school or college degree in a community)
- Social and community context (e.g., people's interactions with family, friends, coworkers, and community members)
- Healthcare access and quality (e.g., lack of health insurance or access to primary care provider)
- Neighborhood and built environment (e.g., neighborhood crime rate, access to clean water)²¹

Unlike healthcare claims and quality measures, there is much greater variability of SDOH data due to a lack of national recognized standards for member-level assessments of SDOH needs.

The National Committee for Quality Assurance (NCQA) defines three levels of SDOH data:²²

- Patient-level healthcare data: This data can be generated by claims/encounter data, as well as electronic medical record data. For example, providers can use ICD-10 "Z codes" to document SDOH on claims data.²³
- Neighborhood-level data: These are data sources that assess community-level unmet needs for SDOH domains. While the American Community Survey and Current Population Survey provide a wealth of information across a range of topics, examples of neighborhood-level data sources that reflect more curated information include:
 - The Robert Wood Johnson Foundation (RWJF) County Health Rankings²⁴ incorporates measures from a variety of publicly available data sources to provide summarized information for the key SDOH domains.²⁵
 - The Neighborhood Atlas and its Area Deprivation Index (ADI), ranking neighborhoods by socioeconomic disadvantage at the state and national level, incorporates data related to household income, education, employment, and housing quality.²⁶ We will explore how the ADI can be incorporated into assessing quality measurement results later in this paper.

- The Community Health Needs Assessment (CHNA) survey, which must be completed by a nonprofit hospital every three years to maintain its tax-exempt status,²⁷ collects data and information from community members and local public health experts. The CHNA contains extensive information on the perceived greatest needs in the community, available social and financial support and services, the perceived health of the physical environment, access to care, and other SDOH measures.
- The CDC provides a number of SDOH data sources, including the Compendium of Federal Datasets Addressing Health Disparities, Disability and Health Data System, National Environmental Public Health Tracking Network, and the Social Vulnerability Index.²⁸
- Other person-level community and social services (CSS) data: CSS data sources may include state data from child welfare, criminal justice, and other human services agencies, as well as member assessments. Examples of this data include:
 - The U.S. Department of Health and Human Services (HHS) Administration for Children and Families (ACF) along with CMS recently released a technical guide that is intended to “support the development of automated, two-way data exchanges” between state Title IV-E and Medicaid agencies to support providing healthcare services and care coordination to children who are under the placement and care responsibility of a Title IV-E agency as a result of a court order or voluntary placement agreement.²⁹ This type of data exchange could be particularly important for improving healthcare for children who have experienced adverse childhood experiences (ACEs) such as foster child populations.³⁰
 - Several states have started performing member-level assessments to support the referral of services that address SDOH needs.
 - The Arizona Health Care Cost Containment System (AHCCCS) is implementing a closed loop referral system to address SDOH needs among its members that includes an evidence-based screening.³¹
 - The North Carolina Department of Health and Human Services (NCDHHS) developed a standardized set of SDOH screening questions that is used by providers, social services agencies, and community organizations in referring services for unmet SDOH needs.³²

Medicaid/HHS agency strategies and options to promote robust and integrated health equity data

State Medicaid agencies have several tools that can be used to improve the systematic collection of data on member demographics and health-related social needs, including obtaining data from other sources. The following section provides a discussion of actions that can be taken to increase the likelihood that collected data will support the understanding of health disparities and design of interventions to meet health equity goals.

ELIGIBILITY AND ENROLLMENT

All states include questions within the Medicaid application to collect an applicant’s demographic data elements, including race and ethnicity, and are required to report this data to CMS through the Transformed Medicaid Statistical Information System (T-MSIS) along with other eligibility data, claims and encounter data, and other information on enrollees.^{33,34} HHS has issued implementation guidance on data collection for race, ethnicity, and other demographic data elements, but states are not required to adopt these standards.³⁵

Importantly, states are not permitted to make the collection of race and ethnicity data mandatory as individuals proceed through the application process because this information is not used to determine an applicant’s eligibility for Medicaid and CHIP.³⁶ As such, there is a high degree of variability among states on the completeness of their race and ethnicity data. In 2019, CMS analyzed the quality of state-reported race and ethnicity data, both in terms of completeness and alignment with external demographic census data, and characterized the data in 22 states as either “high concern” or “unusable.”³⁷

There are strategies states can implement to improve data collection within the eligibility pathway, for example by including language explaining the purpose for collecting race and ethnicity data or training enrollment navigators on how to talk to enrollees about these questions.³⁸ The “We Ask Because We Care” campaign, for example, provides an approach and resources that may alleviate an individual’s concerns about privacy, discrimination, and potential misuse of the data.³⁹ The campaign promotes self-reporting of race, ethnicity, and language preference as a means to improve health equity.

MANAGED CARE CONTRACT TERMS

States can leverage their managed care programs to collect more complete sets of member race and ethnicity data. In fact, states are required to explain within the managed care quality strategy how they plan to identify and address disparities across a number of domains, including race, ethnicity, and language.⁴⁰ States are also increasingly using their managed care contracts to advance strategies on social determinants of health, consistent with recent guidance from CMS articulating a set of approaches managed care states may consider.⁴¹ There are a number of ways states can enhance their managed care contracts and partner with managed care organizations to improve the systematic collection of data to better understand disparities and socioeconomic needs. In addition to contractual measures outside of managed capitation rates, the application of meaningful incentive payments (additional funds on top of the base capitation rates paid to MCOs upon achieving measurable improvements) or withholding arrangements (retention of a percentage of the base capitation payment that is returned on the basis of defined performance goals) are useful tools for enforcing requirements around efforts to improve data collection on disparities and social determinants. For example, incentives could be put in place to improve the reporting of ICD-10 Z codes that identify a member’s SDOH needs.

States can include provisions within their managed care contracts that require contracted health plans to collect demographic data (inclusive of race, ethnicity, and language) and/or health-related social needs on their enrollees through standardized assessment tools. States can direct managed care organizations to report this data to the state or use the data to conduct analytics to identify disparities in access, utilization, or outcomes, and then implement programs and initiatives intended to reduce these disparities. Many states are now requiring their contracted managed care organizations to incorporate analyses of health disparities by race, ethnicity, and language into their quality strategies, such as by requiring plans to stratify performance by race/ethnicity or engaging in performance improvement efforts focused on addressing disparities.⁴² For example, Louisiana’s model contract requires MCOs to stratify quality measures by race, ethnicity, language, and geography, and Arizona directs MCOs to report on disparities and include targeted interventions to reduce disparities as part of their Performance Improvement Projects (PIPs).^{43,44} Additionally, NCQA will be requiring health plans to stratify five measures by race and ethnicity in measurement year 2022, which means managed care organizations should continue to develop the capacity to collect race and ethnicity data.⁴⁵

States can consider building on these efforts by including data collection standards in their managed care contracts to ensure consistency in the categorization of race and ethnicity across their populations, such as by adhering to the 1997 data standards of the Office of Management and Budget (OMB), consistent with HHS guidance.⁴⁶ State Medicaid agencies may also take steps to establish data exchange processes with managed care organizations to share demographic information and improve the completeness of data on both the health plan and state sides. States may also wish to leverage requirements for value-based payment arrangements to create incentives for healthcare providers to collect and report on their attributed members’ demographic or social needs data.

MANAGED CARE ENTITY ACCREDITATION

States increasingly are requiring their managed care programs to be accredited by an independent, nationally recognized accreditation organization such as the NCQA.⁴⁷ NCQA Health Plan Accreditation standards for Population Health Management (PHM), introduced in 2018, require a PHM strategy that includes actions to promote health equity and a population assessment that includes SDOH and the direct or indirect collection of race, ethnicity, and language (REL) data to assess the racial or ethnic needs and language profiles of populations.

NCQA has introduced health equity accreditation, beginning in 2022,⁴⁸ which replaces NCQA's Multicultural Health Care distinction. The health equity accreditation standards require the collection of REL data as well as sexual orientation and gender identity (SOGI) data.

- Race/ethnicity data must include the use of or ability to roll up to the OMB categories.
- For language, in addition to direct data collection, organizations are required to use state-level census or community-level data at least every three years to determine languages and threshold languages (i.e., by 5% of the population or by 1,000 individuals) spoken in the service area.
- Organizations must attempt to collect data on gender identity, although reporting is voluntary and sex assigned at birth.
- Organizations are required to use REL and SOGI data to assess and reduce disparities.

States may consider requiring minimum standards for data collection, such as use of the OMB categories, to facilitate consistency of data sets, and requiring achieving and maintaining accreditation. California, for example, is requiring that all Medi-Cal managed care plans have NCQA Health Plan and Health Equity accreditation by January 1, 2026.⁴⁹

INTEGRATION OF HEALTH AND HUMAN SERVICES DATA

State Medicaid agencies can also take steps to integrate data across Medicaid and other health and human services programs to improve the completeness of race, ethnicity, and other socio-demographic data. Individuals enrolled in Medicaid are often eligible for other programs and services administered by state health and human services and related agencies. Many states have undertaken efforts to streamline eligibility and enrollment in Medicaid and other programs such as Supplemental Nutrition Assistance Program (SNAP) and Temporary Assistance for Needy Families (TANF).⁵⁰ Similarly, there are opportunities to streamline data collection and analytics to have a unified record on individuals' demographic characteristics, socioeconomic conditions, and public program utilization to enable the identification of disparities across programs and to give states a more complete picture of how individuals are navigating social service systems. For instance, if other health and human services programs have more complete data on race and ethnicity, an integrated data set could help Medicaid agencies fill in the gaps in their enrollment data and identify disparities in access and health outcomes. State Medicaid agencies could also use integrated service data to understand the types of health-related social needs their enrollees face and how those factors are associated with healthcare utilization, population health outcomes, and interactions with racial or ethnic disparities.

Rhode Island and California have both undertaken efforts to integrate data across public programs at the person level. Rhode Island's Data Ecosystem links data sets from the Medicaid program, other state-administered public programs—including SNAP, TANF, Supplemental Security Income (SSI), and childcare assistance—public health surveillance, labor and training records, homeless system utilization, and court system records.⁵¹ The Data Ecosystem supports policy development, program operations, and research activities internal to the state and allows external parties to request data.⁵² The California Health and Human Services Agency (CHHS) undertook a pilot effort to integrate data across food and cash aid programs, child welfare, developmental services, Medi-Cal, Women, Infants, and Children (WIC), and other CHHS-administered programs. This pilot led to a routine data-matching process that facilitates better coordination between programs.⁵³

Case study: Using integrated health equity data resources to better understand drivers of quality measure scores

As a case study for health equity data analysis, we provide one example of analysis of state quality score variation using integrated data based on a publicly available SDOH resource previously mentioned, the ADI from the Neighborhood Atlas, and state Medicaid quality scores published by CMS through its Child and Adult Core Set.

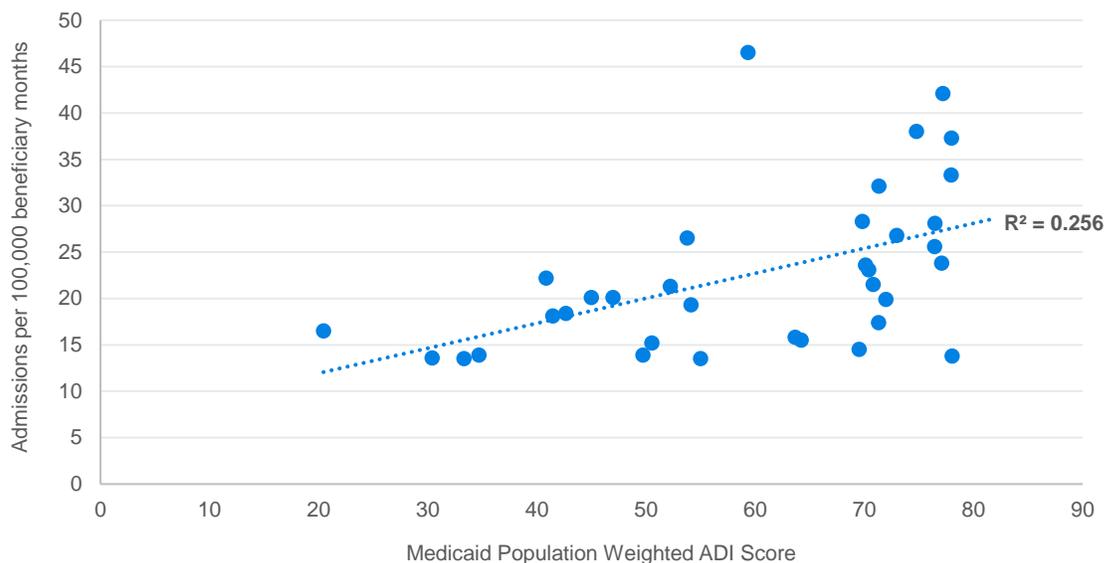
To examine the potential impact of SDOH on state quality performance metrics, we applied the following methodology:

- Selected a sample of federal fiscal year (FFY) 2020 measures that were reported⁵⁴ by 30 or more states in the Core Set data that reflect subject domains intended to be representative of existing health equity initiatives underway by state Medicaid agencies. The selected measures were:
 - PQI01: Diabetes short-term complications admission rate: Number of inpatient hospital admissions for diabetes short-term complications (ketoacidosis, hyperosmolarity, or coma) per 100,000 beneficiary months for beneficiaries age 18 and older.⁵⁵
 - Live births weighing less than 2,500 grams: Percentage of live births that weighed less than 2,500 grams at birth during the measurement year.⁵⁶
 - Postpartum care: Percentage of deliveries of live births that had a postpartum visit on or between seven and 84 days after delivery.⁵⁷
- For each selected measure, we created scatter plots that illustrate the states' performance on the y-axis and the ADI composite percentile from the Neighborhood Atlas for the state's Medicaid population on the x-axis. A higher ADI percentile is suggestive of greater community-level SDOH needs.
- The composite Medicaid ADI percentile score was developed by weighting Medicaid non-dual enrollment reported in the calendar year 2019 American Community Survey by census block group with each census block group's ADI percentile.
 - On a national level, the Medicaid population had an ADI percentile of 55.7, relative to only 40.8 for persons with employer-sponsored insurance.
 - Hawaii's Medicaid population had the lowest ADI percentile, 20.4, while Mississippi had the highest ADI percentile, 81.7. For reference, these two states had an employer-sponsored insurance ADI percentile of 13.9 and 72.3, respectively.
 - New York had the least disparity between its employer-sponsored insurance and Medicaid population (28.9 vs. 33.3), while Texas had the greatest disparity (48.5 vs. 71.3). The lack of spread between New York's employer-sponsored insurance and Medicaid population appears attributable to very low ADI percentiles in the New York City metropolitan area.

The first scatter plot examines the relationship between the diabetes short-term complications admission rate (reported by 35 states) and the ADI.

- The scatter plot indicates that, on average, the diabetes complication rate increases with ADI. The R^2 of the trend line indicates ADI explains approximately 26% of the admission rate variation among reporting states.
- This relationship is in line with research indicating that SDOH factors contribute to higher prevalence of diabetes within communities,⁵⁸ which would also likely contribute to a higher short-term complications admission rate (unless a healthcare system did a significantly better job managing members with diabetes relative to benchmarks).
- Substantial admission rate variation also exists among states with similar ADI values, suggesting that factors other than those measured by the ADI can affect the admission rate.

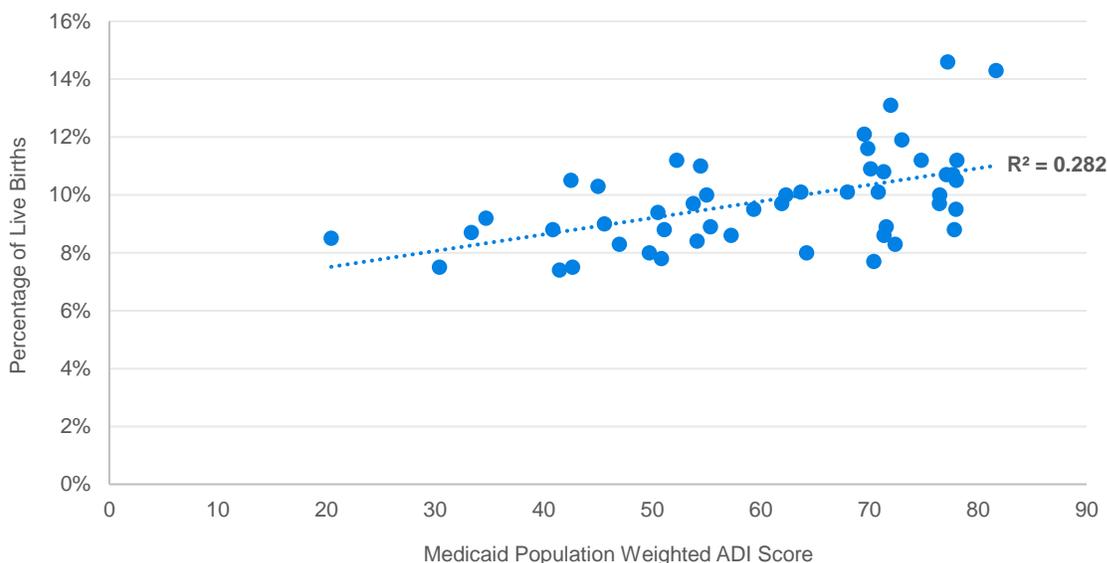
FIGURE 2: DIABETES SHORT-TERM COMPLICATIONS ADMISSION RATE: AGE 18 AND OLDER



The second scatter plot analyzes the relationship between the percentage of live births weighing less than 2,500 grams (reported by 50 states) and ADI.

- The scatter plot indicates that, on average, the percentage of live births less than 2,500 grams increases with ADI. The R^2 of the trend line indicates ADI explains approximately 30% of the low birth-weight rate variation among reporting states.
- The relationship between low birth weights and SDOH is consistent with well-established research indicating that a range of factors influences infant health outcomes.⁵⁹
- As observed in the diabetes complications measure, substantial rate variation also exists among states with similar ADI values, suggesting that factors other than those measured by the ADI can reduce the percentage of births less than 2,500 grams.⁶⁰

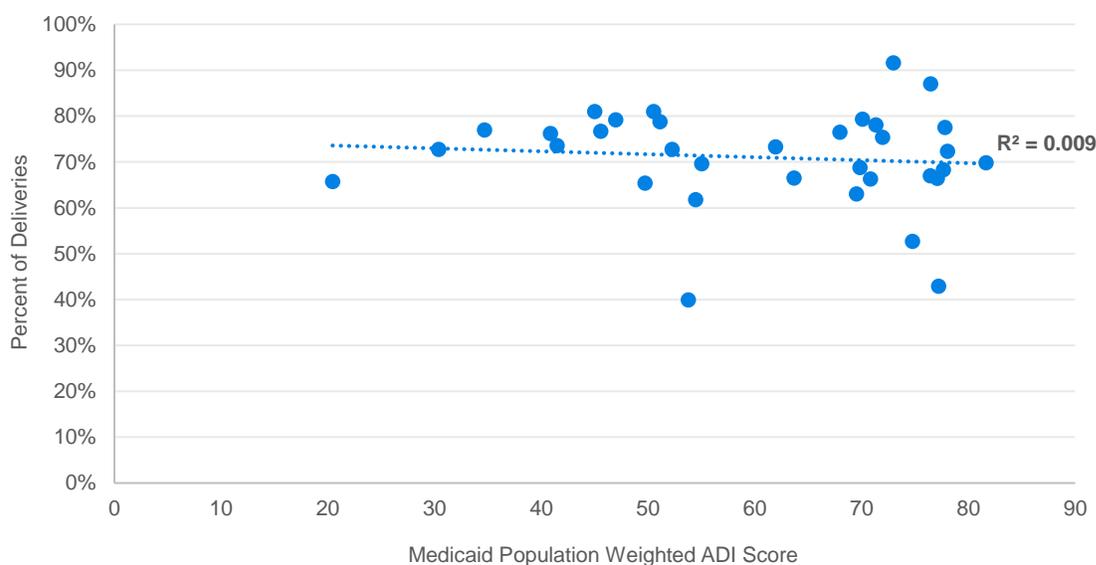
FIGURE 3: LIVE BIRTHS WEIGHING LESS THAN 2,500 GRAMS



While the first two measures were evaluating health outcomes (potentially avoidable hospital admissions related to diabetes complications and birth weights), the third measure, the percentage of live deliveries with a postpartum visit (reported by 34 states), measures healthcare access in relationship to ADI. Unlike the first two illustrated metrics, a higher percentage for this metric indicates better performance.

- The scatter plot indicates that, on average, the likelihood of a postpartum visit decreases slightly as ADI increases. The R^2 of the trend line indicates ADI explains only approximately 1% of the variation among states, indicating a much lower correlation between state performance and ADI relative to the prior illustrated measures.
- While the other measures were reported by states using a common reporting methodology, this measure was reported by states using a mixture of administrative (claims experience only) and hybrid (mixture of claims experience and chart review), which likely contributes to the illustrated variances among states. The five states with the lowest performance for this metric used administrative data only, which is known to result in lower reported performance values relative to hybrid methodologies.⁶¹
- The results for this measure are similar to other access measures, such as well-child visits, which we did not illustrate for this report but reviewed internally. While access to healthcare services is a critical component of health outcomes, it is unlikely to change health outcomes without addressing other SDOH and behavioral factors. In the County Health Rankings model, clinical care contributes 20% to overall health outcomes.⁶²

FIGURE 4: PERCENTAGE OF DELIVERIES WITH LIVE BIRTH THAT HAD A POSTPARTUM CARE VISIT



For the three illustrated measures, data reporting variances may also be contributing to observed differences among states. While this analysis was conducted across states, a similar analysis could be conducted by using ADI at the census tract level and developing quality metrics by ADI cohort using managed care encounter data or fee-for-service (FFS) claims experience.

Validating SDOH and Health Equity Data for Use in Analysis

Consistent with principles of data analysis,⁶³ health equity data should be carefully evaluated before being incorporated into health equity data analysis projects. Unlike healthcare claims data, common coding and classification methodologies may not exist among reporting entities or data sources. Examples of data pitfalls related to health equity analysis may include:

- Data resources available do not sufficiently inform or measure goals of the state's health equity strategy
- The information is required to be collected but often is incomplete, not reported, or is impractical for data analysis purposes
- Inconsistent definitions or language used across agencies related to common measures or demographics such as race and ethnicity
- Data is not shared or not shared efficiently across agencies or at the right level of detail
- Conclusions made by one data source are not supported by values from second existing data sources
- Sample size is insufficient to draw credible conclusions
- The survey results are biased (e.g., the mix of survey respondents does not accurately represent the makeup of the community or population)

Applications of SDOH and health equity data

There are several analyses or processes that may benefit from integrating health equity and social determinants of health data sources. They include:

- **Quality measures:** In order to improve equity in the context of healthcare quality measurement, states and their contracted MCOs must know where disparities exist and what is driving them. This more nuanced analysis of quality performance allows Medicaid agencies and health plans to focus quality improvement activities on the root causes of disparities while avoiding the risk of implementing strategies that may improve performance overall while allowing disparities to persist or get worse. For instance, knowing that the likelihood of delivering babies with low birth weight is greater in areas with a higher ADI (see case study above) may lead a Medicaid program or MCO to test culturally and linguistically sensitive strategies that connect pregnant women with SDOH-related resources in addition to supporting access to prenatal care.
- **Risk adjustment:** Incorporating indicators of social risk into managed care risk adjustment can create funding opportunities to address social needs and more equitably resource managed care organizations or risk-bearing provider organizations that serve larger proportions of socially complex individuals. For example, Minnesota adjusts its population-based payments for Integrated Health Partnerships using indicators of poverty, homelessness, and child protection involvement.⁶⁴ The more health equity data variables Medicaid agencies have at their disposal, the more sophisticated their risk adjustment models may be. However, to the extent the risk adjustment model provides more funding to address health disparities, a state may need to include contractual provisions that the funding is used to reduce disparities rather than increasing MCO margins.
- **Administrative allowance:** States may consider adjusting the administrative component of their capitation rates for contracted MCOs to account for underlying social and demographic differences in their populations. For example, this approach could provide additional resources for health plans that serve more members with limited English proficiency so they are better equipped to develop multilingual programming.
- **Understanding base experience:** Identifying health disparities in the base experience data used in managed care rate-setting can give states a deeper understanding of the factors that are driving cost experience. For example, are lower claims costs in one area of the state attributable to MCO medical management practices or limited provider access? As capitation rates are generally built upon historical experience, not considering these issues may perpetuate underfunding of services for historically underserved populations.

- **Evaluating program performance:** As states evaluate their managed care programs against fee-for-service delivery systems, it is important that they have a clear understanding of what is driving performance. Without accounting for underlying differences in populations and the socioeconomic contexts they live in, states risk drawing spurious conclusions about the drivers of delivery system performance and allowing inequities to persist.
- **Identification of high-risk patients:** Socioeconomic indicators or demographic data can be included within high-risk patient identification algorithms, which are used by MCOs and health systems to target engagement and care management efforts toward sicker individuals. This can enable algorithms to capture more comprehensive sets of patient needs, which can better inform interventions and avoid potential racial biases that may emerge in algorithms that use healthcare costs as a proxy for health status.⁶⁵

Conclusion

Consistent with priorities outlined in the CMS Framework for Health Equity 2022-2032,⁶⁶ state efforts to improve health equity and address SDOH needs are likely to have the greatest impact when supported by robust data resources and analysis. Best practices employed by state Medicaid agencies should identify data resources that may enhance health equity measurement and goal development, and then develop the necessary processes to collect, validate, and integrate these data resources with existing claims and eligibility data available for Medicaid members. Medicaid managed care contractual language could promote MCOs to collect more complete REL and SOGI data, as well as achieve health equity accreditation. Additionally, incentive and withholding arrangements that are part of the managed care capitation rates could be aligned with the Medicaid agency's health equity data strategy.



Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe.

[milliman.com](https://www.milliman.com)

CONTACT

Paul Houchens
paul.houchens@milliman.com

Penny Edlund
penny.edlund@milliman.com

Libby Bunzli
libby.bunzli@milliman.com

ENDNOTES

- ¹ CDC. Health Equity. Retrieved May 10, 2022, from <https://www.cdc.gov/chronicdisease/healthequity/index.htm>.
- ² Ibid.
- ³ Rudowitz, R. et al. (January 18, 2022). Medicaid: What to Watch in 2022. Kaiser Family Foundation. Retrieved May 10, 2022, from <https://www.kff.org/medicaid/issue-brief/medicaid-what-to-watch-in-2022/>.
- ⁴ Artiga, S. (June 1, 2020). Health Disparities Are a Symptom of Broader Social and Economic Inequities. Kaiser Family Foundation. Retrieved May 10, 2022, from <https://www.kff.org/policy-watch/health-disparities-symptom-broader-social-economic-inequities/>.
- ⁵ Gifford, G. et al. (October 2021). States Respond to COVID-19 Challenges but Also Take Advantage of New Opportunities to Address Long-Standing Issues, p. 55. Kaiser Family Foundation. Retrieved May 10, 2022, from <https://files.kff.org/attachment/Report-States-Respond-to-COVID-19-Challenges.pdf>.
- ⁶ Medicaid. Annual Medicaid and CHIP Expenditures. Retrieved May 10, 2022, from <https://www.medicaid.gov/state-overviews/scorecard/annual-medicaid-chip-expenditures/index.html>.
- ⁷ Medicaid and CHIP Payment and Access Commission. Exhibit 30: Percentage of Medicaid Enrollees in Managed Care by State and Eligibility Group, FY 2019. Retrieved May 10, 2022, from <https://www.macpac.gov/wp-content/uploads/2015/01/EXHIBIT-30.-Percentage-of-Medicaid-Enrollees-in-Managed-Care-by-State-and-Eligibility-Group-FY-2019.pdf>.
- ⁸ CMS. CMS Framework for Health Equity 2022–2032. Retrieved May 10, 2022, from https://www.cms.gov/sites/default/files/2022-04/CMS%20Framework%20for%20Health%20Equity_2022%2004%2006.pdf.
- ⁹ Guth, M. & Artiga, S. (March 17, 2022). Medicaid and Racial Health Equity. Kaiser Family Foundation. Retrieved May 10, 2022, from <https://www.kff.org/medicaid/issue-brief/medicaid-and-racial-health-equity/>.
- ¹⁰ CMS. Electronic Health Records. Retrieved May 10, 2022, from <https://www.cms.gov/Medicare/E-Health/EHealthRecords>.
- ¹¹ HealthIT.gov. What is HIE? Retrieved May 10, 2022, from <https://www.healthit.gov/topic/health-it-and-health-information-exchange-basics/what-hie>.
- ¹² HealthIT.gov. A 10-Year Vision to Achieve an Interoperable Health IT Infrastructure. Retrieved May 10, 2022, from <https://www.healthit.gov/sites/default/files/ONC10yearInteroperabilityConceptPaper.pdf>.
- ¹³ Williams, C. (January 18, 2022). How to Get Health Data Infrastructure Right for This Moment of Medicaid Transformation. Health Affairs. Retrieved May 10, 2022, from <https://www.healthaffairs.org/doi/10.1377/forefront.20220113.723542/>.
- ¹⁴ CMS. What Is a Quality Measure? Retrieved May 10, 2022, from <https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/MMS/NTM-What-is-a-Quality-Measure-SubPage#:~:text=Quality%20measures%20are%20standards%20for,effectiveness%20timeliness%20and%20fairness>.
- ¹⁵ Please see <https://us.milliman.com/en/insight/evaluation-of-state-medicaid-scorecard-data-2020-scorecard-update> for information related to the Medicaid State Scorecard's quality measure data.
- ¹⁶ National Committee for Quality Assurance and California Healthcare Foundation (December 2021). Evaluating Medicaid's Use of Quality Measurement to Achieve Health Equity Goals.
- ¹⁷ Medicaid. Adult and Child Health Care Quality Measures. Retrieved May 10, 2022, from <https://www.medicaid.gov/medicaid/quality-of-care/performance-measurement/adult-and-child-health-care-quality-measures/index.html>.
- ¹⁸ NCQA. HEDIS and Performance Measurement. Retrieved May 10, 2022, from <https://www.ncqa.org/hedis/>.
- ¹⁹ AHRQ. CAHPS. Retrieved May 10, 2022, from <https://datatools.ahrq.gov/cahps>.
- ²⁰ Healthy People 2030. Social Determinants of Health. Retrieved May 10, 2022, from <https://health.gov/healthypeople/objectives-and-data/social-determinants-health>.
- ²¹ NCQA (September 2020). Social Determinants of Health Resource Guide, p. 9. Retrieved May 10, 2022, from https://www.ncqa.org/wp-content/uploads/2020/10/20201009_SDOH-Resource_Guide.pdf.
- ²² Ibid., p. 27.
- ²³ CMS (February 2021). Using Z Codes. Retrieved May 10, 2022, from <https://www.cms.gov/files/document/zcodes-infographic.pdf>.
- ²⁴ See the County Health Rankings website at <https://www.countyhealthrankings.org/>.
- ²⁵ County Health Rankings. 2022 Measures. Retrieved May 10, 2022, from <https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/2021-measures>.
- ²⁶ Center for Health Disparities Research. About the Neighborhood Atlas. Retrieved May 10, 2022, from <https://www.neighborhoodatlas.medicine.wisc.edu/>.
- ²⁷ IRS. Community Health Needs Assessment for Charitable Hospital Organizations – Section 501(r)(3). Retrieved May 10, 2022, from [https://www.irs.gov/charities-non-profits/community-health-needs-assessment-for-charitable-hospital-organizations-section-501r3#:~:text=Section%20501\(r\)\(3\)\(A\)%20requires%20a%20hospital,needs%20identified%20through%20the%20CHNA](https://www.irs.gov/charities-non-profits/community-health-needs-assessment-for-charitable-hospital-organizations-section-501r3#:~:text=Section%20501(r)(3)(A)%20requires%20a%20hospital,needs%20identified%20through%20the%20CHNA).
- ²⁸ CDC. Sources for Data on Social Determinants of Health. Retrieved May 10, 2022, from <https://www.cdc.gov/socialdeterminants/data/index.htm>.
- ²⁹ CMS. Toolkit: Data Sharing for Child Welfare Agencies and Medicaid. Retrieved May 10, 2022, from <https://www.acf.hhs.gov/sites/default/files/documents/cb/data-sharing-and-medicaid-toolkit.pdf>.
- ³⁰ CDC. Adverse Childhood Experiences (ACEs). Retrieved May 10, 2022, from <https://www.cdc.gov/violenceprevention/aces/index.html>.
- ³¹ Terech, A. Arizona Social Determinants of Health (SDOH) Program. Retrieved May 10, 2022, from <https://healthcurrent.org/wp-content/uploads/Health-Current-SDOH-CLRS-Roadshow-Presentation-Final-4.9.21.pdf>.
- ³² NCDHHS. Screening Questions. Retrieved May 10, 2022, from <https://www.ncdhhs.gov/about/department-initiatives/healthy-opportunities/screening-questions>.
- ³³ State Health and Value Strategies (May 2021). Collection of Race, Ethnicity, Language (REL) Data in Medicaid Applications. Retrieved May 10, 2022, from <https://www.shvs.org/wp-content/uploads/2021/05/SHVS-50-State-Review-EDITED.pdf>.
- ³⁴ Medicaid. Transformed Medicaid Statistical Information System (T-MSIS). Retrieved May 10, 2022, from <https://www.medicaid.gov/medicaid/data-systems/macbis/transformed-medicaid-statistical-information-system-t-msis/index.html>.
- ³⁵ HHS (October 30, 2011). HHS Implementation Guidance on Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status. Retrieved May 10, 2022, from <https://aspe.hhs.gov/reports/hhs-implementation-guidance-data-collection-standards-race-ethnicity-sex-primary-language-disability-0#Purpose>.
- ³⁶ 42 CFR § 435.907 – Application. See <https://www.law.cornell.edu/cfr/text/42/435.907>.

-
- ³⁷ Medicaid (2019). DQAtlas: Race and Ethnicity. Retrieved May 10, 2022, from <https://www.medicaid.gov/dq-atlas/landing/topics/single/map?topic=g3m16&tafVersionId=23>.
- ³⁸ Lukanen, E. & Zylla, E. (October 1, 2020). Exploring Strategies to Fill Gaps in Medicaid Race, Ethnicity, and Language Data. State Health and Value Strategies. Retrieved May 10, 2022, from <https://www.shvs.org/exploring-strategies-to-fill-gaps-in-medicaid-race-ethnicity-and-language-data/>.
- ³⁹ Institute for Diversity and Health Equity & American Hospital Association (2020). Health Equity Snapshot: A Toolkit for Action. Retrieved May 10, 2022, from https://www.aha.org/system/files/media/file/2020/12/12fdhe_snapshot_survey_FINAL.pdf.
- ⁴⁰ 42 CFR § 438.340 – Managed care State quality strategy. See <https://www.ecfr.gov/current/title-42/chapter-IV/subchapter-C/part-438/subpart-E/section-438.340>.
- ⁴¹ CMS (January 7, 2021). Opportunities in Medicaid and CHIP to Address Social Determinants of Health (SDOH). Retrieved May 10, 2022, from <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>.
- ⁴² State Health and Value Strategies (January 2022). Medicaid Managed Care Contract Language: Health Disparities and Health Equity. Retrieved May 10, 2022, from https://www.shvs.org/wp-content/uploads/2021/08/SHVS-MCO-Contract-Language-Health-Equity-and-Disparities_January-2022.pdf.
- ⁴³ Louisiana Department of Health. Louisiana's Medicaid Managed Care Quality Strategy. Retrieved May 10, 2022, from https://ldh.la.gov/assets/docs/BayouHealth/Louisiana_Quality_Management_Strategy.pdf.
- ⁴⁴ AHCCCS (October 1, 2021). Section A: Contract Amendment. Retrieved May 10, 2022, from https://www.azahcccs.gov/Resources/Downloads/ContractAmendments/ACC/ACC_100121_AMD_FINAL.pdf.
- ⁴⁵ NCQA. Data, Measurement, and Equity. Retrieved May 10, 2022, from <https://www.ncqa.org/about-ncqa/health-equity/data-and-measurement/>.
- ⁴⁶ HHS (October 30, 2011). HHS Implementation Guidance on Data Collection Standards for Race, Ethnicity, Sex, Primary Language, and Disability Status, op cit., Section III, Data Collection Standards and Rationale for Selection.
- ⁴⁷ Currently, 27 states require NCQA accreditation. See <https://www.ncqa.org/public-policy/maximizing-the-use-of-accreditation/#:-:~:text=Twenty%2Dseven%20states%20require%20that,to%20satisfy%20federal%20oversight%20requirements>.
- ⁴⁸ NCQA (November 17, 2021). NCQA Launches Equity Accountability to Eliminate Stubborn Health Disparities. Retrieved May 10, 2022, from <https://www.ncqa.org/news/ncqa-launches-equity-accountability-to-eliminate-stubborn-health-disparities-health-equity-accreditation-provides-framework-for-health-care-organizations-to-improve/>.
- ⁴⁹ California Department of Health Care Services (DHCS). Primary Operations Contract SAMPLE, RFP 20-10029 Exhibit A, Attachment III, p. 42. Retrieved May 10, 2022, via https://www.dhcs.ca.gov/provgovpart/rfa_rfp/Pages/CSBmcomdmcHOME.aspx.
- ⁵⁰ Isaacs, J. et al. (March 2016). Changing Policies to Streamline Access to Medicaid, SNAP, and Child Care Assistance. Retrieved May 10, 2022, from <https://www.urban.org/sites/default/files/publication/78846/200668-Changing-Policies-to-Streamline-Access-to-Medicaid-SNAP-and-Child-Care-Assistance-Findings-from-the-Work-Support-Strategies-Evaluation.pdf>.
- ⁵¹ Rhode Island Health and Human Services. Data Ecosystem: About the Ecosystem. Retrieved May 10, 2022, from <https://eohhs.ri.gov/initiatives/data-ecosystem>.
- ⁵² Ibid.
- ⁵³ Putnam-Hornstein, E. et al. (April 2020). Integrating Data to Advance Research, Operations, and Client-Centered Services in California. Health Affairs. Retrieved May 10, 2022, from <https://www.healthaffairs.org/doi/10.1377/hlthaff.2019.01752>.
- ⁵⁴ Values with data quality issues were excluded from our analysis, consistent with our evaluation of the Medicaid State Scorecard quality metrics. See <https://us.milliman.com/en/insight/evaluation-of-state-medicaid-scorecard-data-2021-scorecard-update-for-additional-information>.
- ⁵⁵ Medicaid. License Agreement 2022 Medicaid and CHIP Adult Core Sets, p. 130. Retrieved May 10, 2022, from <https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-adult-core-set-manual.pdf?t=1647309316>.
- ⁵⁶ Medicaid. License Agreement 2022 Medicaid and CHIP Child Core Sets, p. 79. Retrieved May 10, 2022, from <https://www.medicaid.gov/medicaid/quality-of-care/downloads/medicaid-and-chip-child-core-set-manual.pdf?t=1647309888>.
- ⁵⁷ Ibid., p. 127.
- ⁵⁸ Hill, J. (2013). Understanding the Social Factors That Contribute to Diabetes: A Means to Informing Health Care and Social Policies for the Chronically Ill. Perm J. Retrieved May 10, 2022, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3662286/>.
- ⁵⁹ Healthy People 2020. Maternal, Infant, and Child Health. Retrieved May 10, 2022, from <https://www.healthypeople.gov/2020/leading-health-indicators/2020-ihl-topics/Maternal-Infant-and-Child-Health/determinants>.
- ⁶⁰ One example of a program targeting SDOH to improve birth outcomes is available at <https://www.aha.org/news/insights-and-analysis/2019-10-10-how-one-health-system-targeted-social-determinants-lower>.
- ⁶¹ Houchens, P., Dilworth, A., & Plunkitt, L. (April 2021). Evaluation of State Medicaid Scorecard Data, p. 8. Milliman Report. Retrieved May 10, 2022, from <https://us.milliman.com/-/media/milliman/pdfs/2021-articles/4-20-21-evaluation-state-medicaid-scorecard-data-2020.ashx>.
- ⁶² County Health Rankings. County Health Rankings Model. Retrieved May 10, 2022, from <https://www.countyhealthrankings.org/explore-health-rankings/measures-data-sources/county-health-rankings-model>.
- ⁶³ Actuarial Standards Board (December 2016). Actuarial Standard of Practice No. 23: Data Quality. Retrieved May 10, 2022, from https://www.actuarialstandardsboard.org/wp-content/uploads/2017/01/asop023_185.pdf.
- ⁶⁴ Minnesota Department of Human Services (January 1, 2021). Integrated Health Partnerships Contract. Retrieved May 10, 2022, from https://mn.gov/dhs/assets/ihp-sample-contract-template_tcm1053-327867.pdf.
- ⁶⁵ Obermeyer, Z. et al. (October 25, 2019). Dissecting racial bias in an algorithm used to manage the health of populations. Science. Retrieved May 10, 2022, from <https://www.science.org/doi/10.1126/science.aax2342?cookieSet=1>.
- ⁶⁶ CMS. CMS Framework for Health Equity 2022–2032. Retrieved May 10, 2022, from https://www.cms.gov/sites/default/files/2022-04/CMS%20Framework%20for%20Health%20Equity_2022%2004%2006.pdf.