

Himmelfarb Health Sciences Library, The George Washington University

## Health Sciences Research Commons

---

Health Policy and Management Informal  
Communications

Health Policy and Management

---

2023

### Sexually Transmitted Infections and Social Determinants of Health: Emerging Opportunities in the Medicaid Program

Naomi Seiler

*George Washington University*

Katie Horton

*George Washington University*

Paige Organick-Lee

*George Washington University*

Mekhi Washington

*George Washington University*

Taylor Turner

*George Washington University*

*See next page for additional authors*

Follow this and additional works at: [https://hsrc.himmelfarb.gwu.edu/sphhs\\_policy\\_informal](https://hsrc.himmelfarb.gwu.edu/sphhs_policy_informal)



Part of the [Health Policy Commons](#), and the [Health Services Administration Commons](#)

---

#### Recommended Citation

Seiler, Naomi; Horton, Katie; Organick-Lee, Paige; Washington, Mekhi; Turner, Taylor; and Ryan, Lily, "Sexually Transmitted Infections and Social Determinants of Health: Emerging Opportunities in the Medicaid Program" (2023). *Health Policy and Management Informal Communications*. Paper 37. [https://hsrc.himmelfarb.gwu.edu/sphhs\\_policy\\_informal/37](https://hsrc.himmelfarb.gwu.edu/sphhs_policy_informal/37)

This Report is brought to you for free and open access by the Health Policy and Management at Health Sciences Research Commons. It has been accepted for inclusion in Health Policy and Management Informal Communications by an authorized administrator of Health Sciences Research Commons. For more information, please contact [hsrc@gwu.edu](mailto:hsrc@gwu.edu).

---

**Authors**

Naomi Seiler, Katie Horton, Paige Organick-Lee, Mekhi Washington, Taylor Turner, and Lily Ryan



# Sexually Transmitted Infections and Social Determinants of Health: Emerging Opportunities in the Medicaid Program



## Authors

Naomi Seiler, JD  
Katie Horton, JD, RN, MPH  
Paige Organick-Lee, MPH  
Mekhi Washington  
Taylor Turner  
Lily Ryan

### **Acknowledgement:**

The authors would like to thank all of the experts who participated in interviews for this project (please see Appendix A for a full list). This report was funded by the Centers for Disease Control and Prevention (CDC) through the CDC Foundation. The contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention or the Department of Health and Human Services.

October 2023

# TABLE OF CONTENTS

Introduction .....	1
Methodology .....	1
Social Determinants of Health that Influence STI Risk or Access to Services .....	1
Economic Stability.....	2
Housing Instability .....	2
Healthcare Access and Quality.....	3
Educational Access and Quality .....	3
Neighborhood and Built Environment .....	4
Social and Community Context.....	5
Incarceration.....	6
Medicaid and the Social Determinants of Health: The Landscape.....	6
State Case Study: Colorado .....	7
State Case Study: Wisconsin .....	8
General state flexibilities .....	8
State Case Study: Wyoming .....	9
State Case Study: Minnesota .....	10
Medicaid Managed Care Flexibilities and Requirements .....	10
State Case Study: Massachusetts.....	13
Alternative Payment Models .....	14
Section 1115 waivers .....	14
State Case Study: Connecticut .....	15
Discussion: Considerations for STI Programs and Providers .....	15
Collection of SDOH data.....	15
Referrals to Services .....	16
Medicaid Coverage of SDOH Services .....	17
Eligibility for Services .....	17
Collaborations with Community-Based Organizations.....	18
Focus on the Intersection of Medicaid and the Correctional System .....	19
Specific SDOH Considerations for Youth .....	19
Conclusion .....	20
Appendix A: Interviews Conducted.....	21
Appendix B: Examples of State Medicaid SDOH Initiatives .....	23
Endnotes.....	28

## Introduction

The Medicaid program provides coverage for over 93 million Americans<sup>1</sup> and covers 42% of births.<sup>2</sup> The program already pays for a disproportionate share of sexually transmitted infection (STI)-related medical visits<sup>3</sup> and, due to its scope, could be poised to play an even greater role in addressing the current STI epidemics in the U.S.

Amidst soaring rates of bacterial STIs in the U.S., a growing body of evidence indicates that social factors, such as housing status, socioeconomic status, and education level, significantly impact both STI acquisition risk and access to sexual health services. Until recently, Medicaid was largely restricted to covering clinical services – in this context, STI screening, diagnosis, and treatment. However, in recent years, and with the support of the federal government, state Medicaid agencies and Medicaid managed care organizations have been exploring and implementing a range of approaches to measure and address social determinants of health (SDOH).

These Medicaid initiatives are not focused on STIs or sexual health. However, the heightened attention to SDOH in the Medicaid program offers major opportunities for improving the health of people with, or at risk of, STIs.

Drawing on the literature, state Medicaid policies, and interviews with national experts and state Medicaid programs, this report provides background on the evidence base regarding STIs and SDOH, explains how states are beginning to monitor and address SDOH in their Medicaid programs, and offers recommendations for how STI programs and providers can leverage these initiatives to promote sexual health.

## Methodology

GW conducted 12 semi-structured interviews via teleconference with 25 key informants, including 9 national STI and healthcare system experts and Medicaid officials from 6 states (see Appendix A for a full list of interviewees and affiliations). Interviews were conducted from March to June of 2023.

Project interviews were deemed exempt from IRB review by the George Washington University Office of Human Subject Research (determination on file with authors).

## Social Determinants of Health that Influence STI Risk or Access to Services

Social determinants of health are non-medical factors that influence health outcomes.<sup>4</sup> The World Health Organization defines SDOH as “the conditions in which people are born, grow, work, live, and age, and the wider set of forces and systems shaping the conditions of daily

life.”<sup>5</sup> Social determinants of health can contribute to various health outcomes, well-being, and quality of life.<sup>6</sup>

SDOH like economic stability, healthcare and education access, neighborhood and the built environment, and the social and community context play an important role in the transmission and acquisition of STIs.<sup>7</sup> The Centers for Disease Control and Prevention has committed to integrating consideration of social determinants of health into future STI prevention program designs, further underlining the importance of and connection between STIs and the SDOH.<sup>8</sup>

### Economic Stability

Economic stability encompasses various factors that impacts an individual’s financial well-being, which includes income, wealth, employment status, and occupational category.<sup>9</sup> Social and economic factors, such as socioeconomic status, income levels, poverty, and educational attainment drive overall poor health outcomes due to their ability to influence access to essential resources that affect health outcomes directly or through multiple mechanisms.<sup>10</sup>

Evidence has shown that lower socioeconomic status, high unemployment rate, and low income are associated with increased risk for STIs and higher STI rates.<sup>11,12</sup> Poverty and inequitable resource distribution can contribute to risky behavior, lack of health care, and higher STI rates. Poverty and employment patterns can also influence migration and sexual networks.<sup>13</sup> Economic vulnerability may also lead to engaging in sex work as a source of income, increasing the STI/HIV risk due to having higher numbers of sexual partners and possibly not being able to negotiate condom use.<sup>14</sup>

Individuals who cannot afford basic needs may have difficulty accessing quality sexual health resources and services.<sup>15</sup> This factor is compounded by a general distrust of the healthcare system among many racial and ethnic groups.<sup>16</sup>

Improving socioeconomic status increases access to various resources such as knowledge, social networks, safe/stable housing, and access to healthcare which can mitigate the negative effects of economic instability and improve overall health and well-being.<sup>17</sup>

### Housing Instability

Housing instability is associated with an increased risk of STIs and HIV.<sup>18</sup> Research indicates that housing instability is linked to engaging in risky sexual behaviors such as having multiple sex partners, engaging in unprotected sex, and exchanging sex for resources.<sup>19</sup> A study conducted with low-income women in Baltimore, Maryland found a connection between homelessness, frequent residential mobility, and recent self-reported STI diagnosis.<sup>20</sup> There are several potential pathways through which housing instability can contribute to the increased risk of STIs. Firstly, housing instability can disrupt social networks, leading to increased vulnerabilities in sexual relationships.<sup>21,22</sup> Secondly, housing instability can exacerbate economic vulnerabilities, which can place individuals at a higher risk for STIs. Furthermore, housing instability is associated with other risk factors for STIs, such as substance use and poor mental health.<sup>23</sup> Residential mobility can disrupt access to healthcare services, resulting in reduced

testing and treatment for STIs, leading to ongoing transmission within sexual networks and potentially increasing community prevalence.<sup>24,25</sup>

In the United States, approximately 2.3 million low-income renters face eviction each year, which has significant and detrimental impacts on their daily lives.<sup>26</sup> Non-payment of rent is a primary reason for eviction, highlighting the strong link between eviction and poverty outcomes.<sup>27</sup> More recently, housing costs have increased dramatically relative to income levels to the point where there is no U.S. state where a full-time minimum wage job provides an income to affordably rent a two-bedroom apartment at market rate.<sup>28</sup> Meanwhile, many low-income Americans spend more than 50% of their income on housing.<sup>29</sup>

### Healthcare Access and Quality

Closely related to socioeconomic access, healthcare access is the ability to obtain affordable, quality healthcare services.<sup>30,31</sup> Access to quality healthcare varies dramatically among populations and tends to be worse in higher STI risk areas.<sup>32</sup> The 2019 National Healthcare Quality and Disparities Report compared access measures for minority groups to non-Hispanic Whites and found that Black Americans had worse access to care for 48% of the measures, Hispanics had worse access to care for 65% of the measures, Pacific Islanders had worse access to care for 25% of the measures, and American Indians had worse access to care for 55% of the measures.<sup>33</sup>

Some of the barriers that prevent individuals from receiving timely diagnosis and treatment, especially in cases when the individual is asymptomatic, include lack of resources, poor quality of services, and lack of access to screening and treatment through routine health services.<sup>34</sup> Inadequate clinic hours, limited access to information, and a shortage of transportation options can prevent people from accessing quality sexual healthcare.<sup>35</sup> Increasing screening access with at-home STI testing could be utilized to help address screening disparities and reduce burden of STI infections on communities that lack access to quality care and treatment.<sup>36</sup>

While the Patient Protection and Affordable Care Act (ACA) increased health equity and access to healthcare, including access to STI screening and treatments, people who lack health insurance, especially in the largely Southern non-expansion states, still have limited access to care.<sup>37</sup> Individuals without health insurance tend to be more likely to report poor access to healthcare and having unmet healthcare needs.<sup>38</sup> Poor access to care may promote continuing transmission and prevalence of the disease in the population by increasing the proportion of the population with untreated STIs.<sup>39</sup>

### Educational Access and Quality

Low educational attainment is associated with early risk behaviors such as having twice the odds of earlier sexual debut and fear of negotiating condom use.<sup>40,41,42</sup> Increasing an individual's access to quality education and comprehensive sexual health education increases sexual health literacy and may reduce rates of sexual risk behaviors that lead to STI acquisition.<sup>43,44</sup>



Access to quality education improves health literacy, the ability for individuals to obtain, process, and understand information and access services necessary to make informed health decisions.<sup>45</sup> In the context of STIs, health literacy allows people to understand sexual health, signs and symptoms of infection, prevention methods, and treatment adherence.<sup>46,47</sup> In the United States, only 12 percent of Americans have proficient health literacy skills.<sup>48</sup>

In addition to overall education, comprehensive sex education can increase exposure to health promotion messaging, improving individuals' self-esteem and self-efficacy, while introducing them to safer sexual and social networks.<sup>49</sup> Comprehensive sex education can also delay initiation of sexual intercourse, reduce sexually risky behaviors in adolescents, and reduce acquisition of STIs and HIV.<sup>50</sup>

### Neighborhood and Built Environment

The built environment includes buildings, spaces, and environments that are created and modified by humans, and incorporates where people live, work, and play.<sup>51</sup> Central aspects of the built environment include land use, zoning, buildings, transportation systems, services, and public resources. Such elements of the built environment create conditions for either positive or negative social determinants of health for specific populations. Historical urban planning decisions have disproportionately impacted the health of young people, impoverished individuals, and people of color.<sup>52</sup> These populations often reside within disadvantaged neighborhoods, or high-risk, low-income geographic settings with a disproportionate burden of inequitable planning and zoning, neighborhood stressors, inadequate land usage, and limited access to health-promoting resources (e.g. medical facilities, grocery stores, parks, open space, and schools).<sup>53,54</sup>

Research has found that people living in disadvantaged neighborhoods in large metropolitan areas have higher incidences of HIV, syphilis, herpes simplex virus, chlamydia, and hepatitis B, because inequitable neighborhood resource allocation is associated with high-risk sexual behaviors and decreased access to healthcare.<sup>55</sup> Furthermore, unstable employment increases risk of housing instability which creates physical and financial barriers to healthcare access.<sup>56</sup> These physical barriers (e.g. transportation access, housing insecurity/evictions,<sup>57</sup> inability to be excused from employment) present greater obstacles to individuals seeking STI treatment than their insurance status.<sup>58,59</sup>

Improving institutional assets in the built environment, including hospitals, schools, recreation centers, and housing shelters, can mitigate the structural forces of poverty, racism, sexism, and homophobia that negatively affect sexual health and STI outcomes among disenfranchised populations. Furthermore, interventions in non-health settings, such as churches, salons, barbershops, and prisons, are effective for STI prevention and treatment services, particularly for HIV and syphilis, in under-resourced neighborhoods.<sup>60,61,62,63</sup>

Much research on the built environment and STIs has focused on adolescents, who are disproportionately burdened by adverse sexual health outcomes.<sup>64</sup> Adolescents living in disadvantaged neighborhoods experience higher rates of early sexual initiation, multiple sex

partners, STIs, unintended pregnancies, sexual assault, and lower rates of contraceptive use.<sup>65,66,67</sup> Such risks are exacerbated for LGBTQ+ youth, who make up 7-9% of the population but 29% of youth experiencing homelessness and housing instability. As a result, LGBTQ+ youth experiencing homelessness are more likely to engage in survival sex, or sex in exchange for money, housing, and basic needs, increasing their risk of acquiring STIs.<sup>68</sup> In addition, environmental characteristics of high-risk neighborhoods, such as prominence of abandoned buildings, vacant lots, and trash, were found in one study to be directly associated with increased prevalence of STIs.<sup>69</sup>

Other research has identified contextual characteristics of neighborhoods that prevent or delay STI treatment, including rurality, proximity to screening sites, and overall neighborhood disadvantage. One study found that being adolescent, identifying as female, and living more than 10 miles from a screening site were prominent contextual risk factors for not receiving STI treatment or experiencing significant delays.<sup>70</sup> Another qualitative study on adolescents and young adults living in rural communities found that a lack of recreational facilities for adolescents (e.g. bowling alleys, movie theaters, skating rinks, and museums) encouraged risky behaviors, especially sexually risky behaviors.<sup>71</sup>

### Social and Community Context

Social relationships can inform individuals' health decisions, sex practices, perceptions of sexual risk, and contraceptive use because people often learn about health practices and information from their immediate social networks.<sup>72,73</sup> Sexual behaviors and STI transmission patterns are associated with social cohesion, which is the ability of people to connect to social support within their residential communities. Previous research has found that lower social cohesion is associated with higher rates of STIs and that higher social cohesion is linked to increased condom use.<sup>74,75</sup> Also, research identifies that individuals with higher socioeconomic status (SES) are more likely to work and socialize in communities with similar SES as their residential community.<sup>76</sup> Higher SES is associated with lower STI prevalence, leaving lower SES communities disproportionately exposed to communities with higher STI prevalence.<sup>77</sup>

Other research applies social epidemiology, or the social structures and institutions that shape health outcomes, to better understand community STI transmission patterns. The social epidemiological approach emphasizes that while individuals may contract STIs directly from their sexual partners, understanding the social structures in which individuals choose their partners allows public health professionals to identify the social and environmental forces that perpetuate disparate STI transmission patterns.<sup>78</sup> Greater neighborhood and social interconnectedness can expand individuals' sexual networks and change STI transmission patterns overtime. STIs can spillover between communities, particularly those that are geographically close and socially connected,<sup>79</sup> highlighting the importance of interventions that address both neighborhoods with high STI rates and adjacent neighborhoods.

## Incarceration

As of 2020, about 2.3 million individuals were incarcerated in prisons or jails across the United States, and over 600,000 individuals enter prisons annually.<sup>80</sup> Rates of STIs, such as chlamydia, gonorrhea, and syphilis, are heightened among people who are incarcerated,<sup>81</sup> due in part to disruption of stable partnerships.<sup>82</sup> In addition to the racial disparity in infectious disease rates, incarcerated individuals are less likely to receive their immunizations, which may contribute to the outbreak of infectious diseases, including Hepatitis A and B, within correctional facilities.<sup>83</sup>

In addition, incarcerated individuals often experience comorbidities of infectious disease, which increases their risk of disease contraction. Incarcerated individuals have higher rates of substance use disorders (SUD) and mental illnesses. In 2010, over 65% of incarcerated individuals (1.5 million people) met the Diagnostic and Statistical Manual (DSM)-IV criteria for alcohol or drug dependence.<sup>84</sup>

When individuals are released from incarceration, reintegration into the community can be difficult because of inadequate discharge planning to provide access to services for basic needs (e.g., housing and employment). Lack of such resources is associated with increased morbidity, mortality, and high-risk sexual activity.<sup>85,86</sup> Upon reentry to the community, formerly incarcerated individuals experience greater HIV/STI risk upon release because of engagement in high-risk sexual activity and increased substance abuse.<sup>87</sup> This may include engagement in sexual activity in exchange for money or drugs<sup>88</sup> or because of the dissolution of a romantic partnership post-incarceration.<sup>89</sup> Risk varies among post-incarcerated populations; a 2015 study of bacterial STI rates one-year post-incarceration found rates two to three times higher for women than men, three to seven times higher for Black people than white people, and higher rates among adolescents than adults.<sup>90</sup>

Previous research has found that lack of health insurance for formerly incarcerated individuals led to decreased service utilization within the first-year post-release from a correctional facility.<sup>91</sup> While many low-income adults are eligible for Medicaid coverage, federal law includes an “inmate exclusion” policy that prohibits the expenditure of federal funds on medical care (e.g. Veterans Affairs, Children's Health Insurance Program (CHIP) and Medicaid) for an individual in a public institution. Therefore, states historically terminated Medicaid coverage if an enrollee was incarcerated, creating barriers and delays to re-enrollment and access to medical care once the individual re-entered the community.<sup>92</sup>

## Medicaid and the Social Determinants of Health: The Landscape

States have significant power and flexibility to address SDOH through state Medicaid programs, including SDOH relevant to the STI epidemics.

#### State Case Study: Colorado

The Colorado Medicaid program, Health First Colorado, is working to integrate SDOH work into the operations and coverage decisions of all its contractors and within the overall structure of the program. Health First currently funds small grants to community partners and healthcare providers to target SDOH priorities and is studying SDOH models in other state Medicaid programs. Health First is also considering streamlining the collection of demographic and social risk data to collect SDOH data from beneficiaries on enrollment rather than requiring screening and data collection by multiple providers and other entities.

In 2021, the Colorado legislature passed SB21-181, expanding funding for assessments of health inequity in Colorado and Colorado state programs and for grants to address SDOH in the state.<sup>93</sup> Following SB21-181, Health Care Policy & Financing hosted 12 public town hall meetings with members and stakeholders, published a “Health Equity Plan”, added health equity requirements for all vendor contracts effective July 1, 2022 and launched a Statewide Health Equity Task Force.<sup>94</sup>

In 2021, the Centers for Medicare and Medicaid Services (CMS) – the federal agency responsible for administering the Medicaid program at the Department of Health and Human Services – sent a memo to state Medicaid directors entitled “Roadmap for States to Address the Social Determinants of Health to Improve Outcomes, Lower Costs, Support State Value-Based Care Strategies.”<sup>95</sup> As then-CMS Administrator Seema Verma noted, “[S]ocial determinants of health, such as access to stable housing or gainful employment, may not be strictly medical, but they nevertheless have a profound impact on people’s wellbeing.”<sup>96</sup> The memo outlined a set of delivery, benefit, and payment authorities that states can use to address a range of SDOH, including housing-related services and supports; transportation; home-delivered meals; educational services; supported employment; community integration and social support; and case management.<sup>97</sup>

States’ efforts to address SDOH through their Medicaid programs, already taking place before 2021, have continued and expanded since. The efforts generally land under four general approaches: using existing state options to cover specific benefits related to SDOH; permitting or requiring Medicaid managed care organizations to address SDOH; utilizing Section 1115 waivers to try specific new models; or applying alternative payment models that include the flexibility to address SDOH.

It is important to note that, as illustrated in the state examples included in this report, the scope of such efforts varies significantly by state. Some states are only piloting SDOH-related programs for a small segment of their Medicaid programs, for example, while others have enacted statewide policies. In addition, states that have expanded their Medicaid programs under the ACA can reach more people with SDOH initiatives than non-expansion states, where a significant number of low-income adults lack access to Medicaid.

#### State Case Study: Wisconsin

Wisconsin's Medicaid program is engaged in multiple efforts to track SDOH and address risks for low-income people.

One recent initiative of Wisconsin Medicaid, the Asthma-Safe Homes Program (ASHP), provides home remediation services to the families of beneficiary children with asthma in Kenosha County and Milwaukee County.<sup>98</sup> The program engages community partners and local health departments to provide home repairs and remediation in addition to education services for families of children with asthma.

Another recently established program, the Housing Support Services Health Services Initiative, provides housing transition, support, and sustaining services to pregnant Medicaid beneficiaries and the families of Medicaid enrollees under 18 who are homeless or at risk for homelessness.<sup>99</sup> Like the ASHP, the Housing Support program relies on partnerships between the state Medicaid program, local health departments, and community-based organizations to identify eligible families and provide appropriate services.

Wisconsin's Department of Health Services also manages targeted programs through Medicaid to address SDOH-related risks for pregnant and post-partum beneficiaries. Doula and community-based organizations have provided pregnancy and post-partum support on a pilot basis in their managed care programs, facilitated by the Medicaid program's Performance Improvement Projects. Programs were selected based on evaluations of existing health disparities, including identifying programs serving high social need areas in order to maximize impact.

#### General state flexibilities

States have considerable flexibility to design their Medicaid programs to allow for coverage of services to coordinate care, provide social support, and link people to housing, transportation, employment, nutrition services, and other community-based services.<sup>100,101,102</sup> States can also provide case management services tailored for certain populations, such as Medicaid-eligible individuals with serious mental illness or substance use disorder who are experiencing or at risk of experiencing homelessness.<sup>103</sup> In some cases, case management services include consideration of SDOH needs in risk stratification, ensuring care managers coordinate with community and social support providers, and integrating SDOH as part of an enrollee's overall care plan.<sup>104,105,106</sup>

### State Case Study: Wyoming

Wyoming Medicaid operates a care management and health intervention program called WYhealth that employs a team of “Nurse Care Managers” to support members with chronic and acute health conditions as well as screen Medicaid enrollees for key social determinant risk factors.<sup>107</sup> Providers and community organizations can refer Wyoming Medicaid enrollees to the WYhealth program based on chronic or acute conditions or perceived social needs. Medicaid enrollees can self-refer to the program.

Upon a positive screening, WYhealth nurses connect members with community organizations that have the resources to address their specific SDOH needs. Members may receive information about services for housing, food assistance, employment support, or referrals to other local, state, and federal assistance programs that provide nutrition, rent, utilities, and other types of aid. Given that many Wyoming Medicaid members live in rural areas, the program works to leverage a limited transportation benefit to connect members to services that might otherwise be inaccessible.

Wyoming Medicaid also runs a program called Project Juno that supports members who are experiencing a high risk pregnancy or are identified as high risk during the postpartum period. Through Project Juno, enrollees are screened for SDOH, adverse childhood experiences, and depression.<sup>108</sup> In addition to screenings, enrollees receive follow up messaging, maternity-specific educational messages, and resource suggestions. All positive screens are escalated to WYhealth nurse care managers for case management.

Medicaid health homes are an optional state plan benefit for people with or at risk for multiple chronic conditions. Providers, or a team of providers, receive a payment (often per-member, per month) to coordinate medical care and offer comprehensive care management, care coordination, health promotion, comprehensive transitional care, patient and family support, and referrals to community and social support services such as housing, transportation, employment, or nutritional services.<sup>109</sup> Maine’s Medicaid program, for example, has a health home for beneficiaries with opioid use disorder that incorporates screenings for housing needs and referrals to services to address social needs.<sup>110</sup>

### State Case Study: Minnesota

Minnesota's Medicaid program uses various approaches to addressing SDOH among its beneficiaries.

One program, the Housing Stabilization Services program, provides housing assistance to adult Medicaid beneficiaries with persistent mental illness or substance use disorder who are housing insecure or are at risk of housing insecurity.<sup>111</sup> Through the program, Medicaid reimburses housing assistance providers and agencies for services that help eligible beneficiaries identify and transition into housing, maintain housing, and work through other housing-related needs.<sup>112</sup> While many beneficiaries have expressed interest in receiving services through the program, challenges remain that limit its reach. Some parts of Minnesota do not have enough housing to meet demand, a limitation that Minnesota's Medicaid program cannot address on its own, and many stabilization service providers are not already contracted with Medicaid, creating an additional barrier for more widespread implementation of the housing program. Additionally, program implementation required planning and funding to engage providers and community members, and beneficiaries are slowly joining the program, making short-term evaluations of the program less accurate.

More broadly, the Medicaid program identifies the social needs and risk factors of beneficiaries at the time of enrollment, asking questions about housing, food security, and involvement with the criminal justice system. Information on Medicaid enrollees is linked to enrollment data for social service programs, like SNAP, that are also housed in Minnesota's Department of Human Services (DHS). This linkage enables DHS to track outcomes and make referrals within the state's safety net programs in a standardized manner.

### Medicaid Managed Care Flexibilities and Requirements

Thirty-nine states and DC contract with Managed Care Organizations (MCOs) to provide most or all care for enrollees, typically for a capitated monthly rate. Nationally, two-thirds of all Medicaid beneficiaries are covered by MCOs.<sup>113</sup> Key approaches relevant to addressing STIs include:

- **In-Lieu-Of Services (ILOS):** Medicaid MCOs can provide targeted SDOH services by substituting these ILOSs for other covered services under the state plan.<sup>114,115</sup> California, for example, encourages Medicaid MCOs to provide housing transition services and other housing-related needs as ILOSs.<sup>116</sup>
- **Value-Added Services:** Medicaid MCOs can voluntarily pay for non-medical services, including those addressing SDOH, as "value-added" services.<sup>117</sup> For example, MCOs can provide enabling services such as case management or transportation services not covered under the state plan, post-discharge meals, and education services, lodging for individuals experiencing homelessness, and transitional housing.<sup>118</sup>

MCOs have considerable flexibility to monitor and address their enrollees' SDOH through these approaches. In addition, states can *require* MCOs to address SDOH by including specific

relevant requirements, such as enrollee screening, needs assessments, and care coordination, in their contracts with MCOs. For example:

- States increasingly require MCOs to refer beneficiaries to social services to address SDOH needs. For example, states can require MCOs to partner with community-based organizations or incentivize providers to create referral processes that fit with the patient population. States could require, or MCOs could independently, leverage technology to ensure closed-loop referrals to social service supports.<sup>119</sup>
- MCOs are federally required to implement an ongoing comprehensive quality assessment and performance improvement program to improve the quality of their services and member outcomes. States have significant flexibility in defining Quality Assurance/Performance Improvement (QAPI) requirements.<sup>120</sup> States can require MCOs to incorporate SDOH in their QAPI programs, either through the development of a specific work plan or performance improvement projects targeting SDOH or as part of the MCO's overarching QAPI program. Additionally, to permit better tracking of SDOH data, some states include MCO contract provisions to promote provider use of Z codes on claims.<sup>121</sup>
- States can develop MCO reimbursement strategies such as performance withholds or bonuses earned based on patient outcomes to create incentives for MCOs to adopt strategies addressing SDOH.<sup>122</sup> Additionally, some states require MCOs to either encourage or require their provider networks to incorporate SDOH screenings into their practices.<sup>123</sup>
- States typically define minimum staffing requirements in their MCO contracts, ensuring sufficient MCO resources are dedicated to priority areas. Some states require that MCOs train their staff about SDOH, and have staff members dedicated to addressing the SDOH and connecting beneficiaries to resources to address SDOH.<sup>124</sup>

#### **Z Codes: Potential Way to Measure SDOH Data**

A set of ICD-10 codes called “Z codes” captures patient information on the social determinants of health, and store this information within the patient’s electronic health record (EHR). These Z codes can include education and literacy, employment, housing, ability to obtain adequate food, and exposures, such as exposures to lead paint, radiation, chemicals, and occupational hazards, and other SDOH.<sup>125</sup> Physician offices, health clinics, and other settings can utilize Z codes embedded in the EHR. However, interviewees noted that Z code use is not required, standardized, or even used widely. This reduces the usefulness of Z codes if Medicaid or MCOs only receive Z code data for a small percent of the population.

While Z codes can help healthcare settings understand the patient population’s needs, screening questions regarding a person’s SDOH may cause patient discomfort. Z codes may be inaccurate due to stigma or fear, such as concern about losing parental custody if housing is unstable. Additionally, one interviewee noted that Z codes tend to follow a person in the EHR even after their SDOH has been resolved, resulting in further inaccuracies in measuring SDOH needs at the population level or gauging effectiveness of program interventions.



States can account for social factors when setting capitation rates so they more accurately reflect the relative resource needs of individuals likely to require greater medical care because of social factors (e.g., housing insecurity, and neighborhood stress).<sup>126</sup> Massachusetts, for example, has a capitation rate adjustment that accounts for neighborhood stress scores, including ZIP code data, an ICD code for homelessness, and serious mental illness and SUD.<sup>127</sup>

### State Case Study: Massachusetts

MassHealth, Massachusetts' Medicaid and Children's Health Insurance Plan agency, contractually requires its Medicaid Accountable Care Organizations (ACOs) to screen their beneficiaries for health-related social needs (HRSNs) and assist their beneficiaries in addressing needs identified through screening.

MassHealth ACOs and hospitals will also be required to submit HRSN data to MassHealth using ICD-10 Z Codes to track population level trends and associate particular social and health needs with geography at the zip code level. Using this data, MassHealth will develop an internal dashboard to understand associations between health, geographic, demographic, and SDOH factors of members and better target interventions using these associations.

As part of MassHealth's broader effort to address SDOH for beneficiaries, MassHealth determined that addressing its beneficiaries' housing and nutrition need could have a significant impact on health outcomes. Beginning in 2005, MassHealth added housing search and placement services for individuals who are chronically homeless to its behavioral health (BH) managed care benefit (program called Community Supports Program (CSP) for Chronically Homeless Individuals). In 2023, MassHealth expanded its CSP housing benefit to cover the fee-for-service population with BH needs, provide housing search and placement services for homeless individuals that are high utilizers of health care (CSP - Homeless Individuals), and provide eviction prevention services for individuals at risk for homelessness (CSP – Tenancy Preservation Program).

In 2020, MassHealth launched its pilot Flexible Services Program, which provides nutrition and housing supports for ACO beneficiaries. For beneficiaries with housing needs, including those without BH needs, MassHealth can provide funds to its ACOs to pay for housing search and placement services, various housing goods like housing deposits and linens, home modifications, education aimed at improving housing stability, and transportation to housing services. For beneficiaries with nutrition needs, MassHealth can provide funds to its ACOs to pay for medically necessary and nutritionally appropriate foods, vouchers, cooking supplies, and transportation to nutrition services.

Additional supports and coordination are available through MassHealth for individuals recently released from prisons or jails, and/or who are receiving probation or parole supervision, to safely and effectively transition back into the community, including support in finding and maintaining stable housing (CSP – Individuals with Justice Involvement). Beginning in 2025, MassHealth anticipates combining its Specialized CSP programs (i.e., CSP-Chronically Homeless Individuals, CSP-Tenancy Preservation Program, CSP-Justice Involvement) and the Flexible Services Program into a single unified HRSN Services framework, which includes moving the Flexible Services Program into the ACO managed care structure.

## Alternative Payment Models

A variety of optional payment models allow states to pay for care in ways that can include addressing social determinants of health. These include integrated care models such as Medicaid Accountable Care Organizations that emphasize person-centered, continuous, coordinated, and comprehensive care. These models typically include partnerships with community-based organizations, social service agencies, and public health agencies.<sup>128</sup> Integrated care models can address SDOH through interdisciplinary care teams or care coordination services.<sup>129</sup> The payment mechanisms tied to these models (e.g., per member per month payments with or without quality or cost incentives or shared savings/risk models with quality requirements) may incentivize providers to address the SDOH-related needs of beneficiaries.<sup>130</sup>

## Section 1115 waivers

Section 1115 waivers allow states to waive provisions of federal law that would otherwise limit new experimental, pilot, or demonstration projects related to eligibility, benefits and cost-sharing, or payment and delivery systems.<sup>131,132</sup> States can request federal matching funds through Section 1115 to test the effectiveness of providing services like one-time community transition services to supportive housing for individuals experiencing or at risk of homelessness. Under an 1115 waiver, states can pilot services for a specific population (e.g., by age or defined risk factors) or a limited geographic area, which could help expand access to rural populations or populations experiencing high rates of STIs. States can also test alternative payment methodologies under Section 1115 authority.<sup>133</sup>

States have used Section 1115 waivers in a variety of ways to address SDOH. For example, North Carolina's Healthy Opportunities Pilot provides enhanced case management and SDOH-related services related to housing, food, transportation, and interpersonal safety. Eligible MCO beneficiaries must have at least one physical or behavioral health risk factor and at least one social risk factor including housing or food insecurity, transportation insecurity, or interpersonal violence risk.<sup>134</sup> Oregon's Section 1115 waiver provides financial incentives to managed care plans to measure and address health-related social needs.<sup>135</sup> Under an 1115 waiver, California offers housing services to Medicaid beneficiaries who are either homeless or at risk of homelessness and are recuperating from hospitalization.<sup>136</sup> California also has a pending waiver proposal to use Medicaid funds for grants to increase the strength of the state's reproductive health system.<sup>137</sup> In addition to increasing provider capacity, grants would be used for to support partnerships with community based organizations (CBOs) "who can assist with transportation, child care and similar needs," and to connect patients with other social and health services.<sup>138</sup> For STI programs and for their community partners that are not clinically focused, such partnerships could be a way to leverage Medicaid support for key support services to address STIs and promote sexual health.

#### State Case Study: Connecticut

Connecticut's Medicaid program, Husky Health, operates under a fee-for-service model with Accountable Service Organizations (ASOs) rather than a managed care model.<sup>139</sup> Though operating without managed care limits some of the tools available to Connecticut to address SDOH in their Medicaid population, all SDOH interventions in Connecticut apply uniformly to Medicaid beneficiaries statewide, unlike interventions in other states designed specifically for certain managed care beneficiaries.

Connecticut is currently pursuing a Section 1115 waiver to integrate more social services supports into its Medicaid program. The waiver will aim to achieve multiple state priorities including lowering costs by focusing on targeted preventive care and improving outcomes for vulnerable Medicaid enrollees.

Looking to the example of other states, Connecticut hopes to use Medicaid funds to provide nutrition benefits to targeted populations including medically-tailored meals, nutrition education, and other services that would increase access to medically appropriate meals. Additionally, Connecticut plans to include Medicaid funding for housing supports in its Section 1115 waiver, to complement existing state housing programs. Connecticut proposes to use Medicaid funding for both direct housing costs like rent, utilities, and down payments in addition to housing support services like housing search assistance and eviction prevention.

Please see Appendix B for further examples of state SDOH initiatives.

## Discussion: Considerations for STI Programs and Providers

Based on the landscape of state and MCO efforts, our conversations with Medicaid officials, and the existing evidence on the relationship between STIs and SDOH, we offer the following considerations and recommendations for STI programs and providers.

### Collection of SDOH data

Efforts to allow or require providers to track SDOH or health-related social needs among their clients could serve both individual and public health goals in the context of STI services.

If providers of STI services begin to formally identify unmet social needs among their patients, they can better understand the factors that are impacting individual risk and choices. They can also identify whether and how these needs change over time. However, care should be taken to ensure effective screening questions. For example, interviewees noted that some patients are reluctant to share information about food or housing insecurity due to fear of losing custody of their children. Extra effort should be taken to ensure that SDOH data collection questions ensure accuracy and do not cause additional discomfort for patients. A national strategy for a SDOH

screening tool with definitions and uniform screening questions would help departments more readily facilitate effective and useful SDOH-related screening tools.

One interviewee also noted that requiring providers to collect SDOH data can be highly burdensome, and if unfunded, can contribute to provider burnout. Additionally, asking providers to collect SDOH data but not improving capacity to address these SDOH-related needs can cause moral burden and frustration of providers, making them less likely to participate in screening programs that do not have a clear use for this data.

Federally Qualified Health Centers (FQHCs) are well suited to collect SDOH-related data and identify patients with STIs and SDOH needs. FQHCs are typically supported by the presence of community health workers and other staff to consider and effectively address SDOH risk and other factors when treating STIs, and have additional resources and provide follow-up care within a patient's whole household to ensure the effectiveness of interventions.

To the extent SDOH data is collected centrally, STI programs may be able to track the relationship between unmet social needs, STI risk and utilization of STI services. This could potentially be accomplished by an analysis of claims data for STI testing and treatment, along with any SDOH data gathered and reported by providers. A data sharing agreement between the Medicaid agency and a departmental surveillance division could allow inclusion of data on positive tests, further informing agencies about community level needs.

### Referrals to Services

As discussed below, a few states are using Medicaid (or CHIP) funds to specifically pay for unmet social needs. However, more broadly, most Medicaid programs considering SDOH are envisioning referrals to non-Medicaid-covered services. For example, a provider who identifies a patient with unstable housing could refer that patient to specific housing service providers. Closed-loop referral systems can help ensure that patients are referred successfully, and data can be collected to identify possible improvements to increase referral success.

Whether or not they are currently formally screening for SDOH, STI programs and providers could begin planning now for how to develop robust referral systems that meet the needs of their specific clientele. Providing referrals may require specific knowledge of the range of services available in the state/community, as well as staff (e.g. case managers or social workers) and relationships with social service agencies or community-based organizations.

STI service providers may want to develop specific relationships with providers that have the cultural competence to serve their patient populations, including youth, LGBTQ+ people, people of color, and others. Developing a directory or other system for STI providers could be a task for local or state departments of health, who can centralize information about eligibility for a range of public and private programs.

One way to identify appropriate referral partners could be to reach out to the Ryan White program for people living with HIV. For STI clients who are living with HIV, the Ryan White program can cover a broad range of support services related to social needs including housing,

transportation, legal services, and nutrition. For people who are HIV-negative, the same organizations may be appropriate sources of services or referrals under different funding streams.

### Medicaid Coverage of SDOH Services

As discussed above, a number of states are going beyond referrals, using Medicaid funding to pay for certain services for enrollees with unmet social needs. For example, Massachusetts is providing housing cost and coordination services to their Medicaid program's unhoused population, and Minnesota Medicaid is coordinating with DHS to track and support enrollment into SNAP and other programs to address food insecurity, housing, and other needs. Such efforts can be costly, and coordination with state legislatures to align priorities may be required.

STI programs and providers should be aware of specific Medicaid-covered social services available to enrollees and find ways to provide, or connect their clientele to, those services. For example:

- Even without special waivers or payment models, Medicaid programs can reimburse for individual or group health education.<sup>140</sup> Such services could be used for education on STI prevention and sexual health generally.
- Medicaid programs can fund partnerships or connections with community-based organizations, local health departments, and other organizations to connect enrollees to needed support services and education. STI programs or providers could work with Medicaid programs to identify social service providers who are competent to serve young adults, LGBTQ+ populations, and others who might need both STI and social support services.
- Medicaid programs can encourage or facilitate systems for community-based organizations to bill Medicaid for providing services to Medicaid beneficiaries to improve sustainability of the organizations and incentivize programs to connect more Medicaid-enrolled persons to SDOH-related services.

### Eligibility for Services

In some states, Medicaid SDOH programs are targeted only to specific populations, either based on demographics, health status, specific unmet social needs, or geographic part of the state. STI programs and providers should take note of these eligibility factors and cross-walk them with STI risk and access to STI services to identify ways to maximize their benefit for their patient populations. For example:

- STI risk is highly associated with SUD,<sup>141</sup> and many states have Medicaid SDOH initiatives that support people with SUD. As of 2018, 38 state Medicaid plans cover peer support services, 29 cover comprehensive community supports, and 4 states cover tenancy support services for people with SUD to find stable housing.<sup>142</sup> STI programs and providers could reach out to these initiatives to identify ways to integrate STI

screening and services into the existing suite of clinical and social supports provided to this population.

- Other states may focus on the prenatal through postpartum period. As with SUD initiatives, STI programs could work with Medicaid officials to ensure that STI screening and services are integrated into the set of supports provided to participants.
- In states with geographically limited initiatives, STI programs should identify high-volume STI providers in the region to ensure that they are aware of the program and how to connect their patients to it.
- States can identify populations with high SDOH-related needs and conduct cost-benefit or return-on-investment analysis to determine which programs would be most effective to implement. However, this may result in equity issues if programs for the most-at risk populations are underutilized, lowering their cost-effectiveness.

### Collaborations with Community-Based Organizations

Most social determinants of health are not directly addressed in the clinical setting. Meeting unmet social needs related to housing, food, transportation or other areas often depends on the involvement of non-clinical social service organizations or providers, who are unlikely to be Medicaid participants. To support such providers, Medicaid agencies and MCOs can use approaches that go beyond traditional reimbursement.

For example, housing support services through Minnesota’s Medicaid program leverage relationships with community-based housing providers and fund services through these organizations to meet the housing needs of vulnerable Medicaid beneficiaries. Another housing support program in Wisconsin relies on community organizations and local health departments to identify families who may be eligible for Medicaid-funded services to improve the conditions of housing.

For STI programs and for their community partners that are not clinically focused, such partnerships could be a way to leverage Medicaid support for key services to address STIs and promote sexual health.

Care and attention should be paid to what programs are developed between CBOs and MCOs. Interviewees noted that organizations tend to pick the “lowest-hanging fruit”, implementing programs that easily and quickly address some SDOH-related needs, typically ones that are low-cost and easy to implement at the program level. Medicaid agencies and MCOs could set up incentives or payment structures like capitation payments, or create requirements to ensure that MCO-CBO partnerships and other programs are able to address more needs and implement programs that address core needs of the population, instead of addressing needs that are less important but are easier to address.

## Focus on the Intersection of Medicaid and the Correctional System

As discussed above, involvement with the correctional system is a social factor with a significant impact on sexual health. Recently, states have developed a variety of approaches to “suspend,” rather than terminate, Medicaid coverage to maintain inmates’ access to health care services and facilitate a continuity of care upon reentry.<sup>143</sup> The goal is to permit a smoother reactivation of coverage when people reenter the community, reducing gaps in insurance coverage and care. In some states, these approaches are combined with screening or coordination requirements related to health needs and/or Medicaid eligibility, or requirements that Medicaid managed care organizations coordinate a transition to care in the community for people leaving prisons and jails.

Other states have proposed Section 1115 waivers to permit Medicaid coverage for a set of services for people while they are still inmates. In January 2023, CMS approved a California waiver to cover certain Medicaid services for inmates during a period before their release, and the agency has encouraged other states to submit their own applications, with several pending.<sup>144</sup>

STI program staff and providers should identify their state Medicaid program’s policy on inmate reentry, and identify opportunities for STI screening, education, and connection to services.

## Specific SDOH Considerations for Youth

Adolescents and young adults – who, between ages 15 and 24, bear the burden of 46% of all new STIs – can be impacted by SDOH in distinct ways.<sup>145</sup> Because 53% of Medicaid or CHIP enrollees are under age 21, and 7% are age 21-26, STI stakeholders should consider what role the program could play in mitigating barriers and risk factors specific to these populations.<sup>146</sup>

Some common SDOH impacting STI risk and access to STI services generally are experienced in heightened ways among youth. In some regions, adolescents and young adults may be more likely to lack transportation to medical and support services, making telehealth options to address STI needs, and self-collection test kits for STIs particularly relevant for this population. LGBTQ+ youth, who are disproportionately impacted by STIs,<sup>147</sup> are also far more likely than non-LGBTQ+ youth to experience homelessness.<sup>148</sup> Children are also more likely to live in poverty than adults, making up one-third of all people living in poverty despite making up 22% of the population.<sup>149,150</sup>

In addition, young people can face distinct social risk factors and barriers to services. Adolescents, particularly minors, bear the impact of laws and policies that limit their consent or privacy with regard to STIs. Generally, state minor consent laws for sexual health services apply regardless of payer.<sup>151</sup> However, interviewees noted that Medicaid programs apply additional policies, such as sending certain notices to enrollees’ houses by mail, that can jeopardize adolescent enrollees’ privacy when accessing these services. Increasing confidentiality regarding plan documents would be a start, allowing adolescent and other enrollees to access services with less fear of disclosure regarding their sexual activity, orientation, or other factors.

As noted above, Medicaid-supported tracking of SDOH data for adolescents as well as adults could help providers better serve individual youth and help STI programs better serve



communities. It may be helpful for STI programs and providers to reach out to any school-based health clinics in their region to identify if those clinics are participating in Medicaid and in any Medicaid-based SDOH initiatives or tracking.

In addition to these factors, a growing body of state laws targeting youth, such as bans on access to trans care and Florida's "Don't Say Gay" law blocking discussion of lessons regarding sexual orientation and gender identity in all grades may harm mental health and promote stigma among youth. Such laws may reduce youth's understanding of STIs and contribute to more stigmatizing language that further reduces youth's desire to disclose information to or visit healthcare providers. Additionally, Florida and other states have passed laws banning gender affirming care or coverage in Medicaid for such care, further contributing to a hostile environment for LGBTQ persons who seek support and care in the healthcare system.

State and local STI programs and STI providers can work together with community-based organizations to discuss relevant "policy determinants of health" in the state, for youth and all clients, and identify ways to mitigate stigma, mental health harms, and other negative impacts.

## Conclusion

Social determinants of health have a significant impact on STI acquisition risk and on access to STI and broader sexual health services. Therefore, growing attention to SDOH in the Medicaid program creates a host of opportunities for STI programs and providers of STI services to better understand and serve their Medicaid-enrolled patients. STI stakeholders should learn about, and engage with, these efforts now to ensure that they are maximizing opportunities to include sexual health in statewide efforts and to tap into broader initiatives as providers.

## Appendix A: Interviews Conducted

### National Sexual Health and/or Health Systems Experts (6 interviews total)

**Armonte Butler**, Associate Director, LGBTQ Health & Rights, Advocates for Youth.

**Pedro Carneiro, MPH, PhD**, Clinical Data Scientist, National Association of Community Health Centers

**Kimberly Diaz Scott**, Vice President for Policy and Communications, National Family Planning and Reproductive Health Association

**Neda Jasemi, MS**, Policy Analyst, National Association of Medicaid Directors

**Hannah Lascano, MPH**, Senior Program Associate, Association for Community Affiliated Plans

**Enrique Martinez-Vidal, MPP**, Vice President for Quality and Operations, Association for Community Affiliated Plans

**Kathy McNamara, RN**, Associate Vice President of Clinical Affairs, National Association of Community Health Centers

**Madalyn News, MPH**, Senior Medicaid Program Associate, Association for Community Affiliated Plans

**Bob Philips, MD, MSPH**, Director, Center for Professionalism and Value in Health Care, American Board of Family Medicine

### State Medicaid Agencies (6 interviews total)

Colorado:

**Aaron Green, MSW, MSM**, Colorado Department of Health Care Policy and Financing - Health Disparities and Equity, Diversity and Inclusion Officer

**Peter Walsh, MD**, Chief Medical Officer, Colorado Department of Health Care Policy and Financing Connecticut:

**Katharine (Katie) Berdy**, Office of the Governor Fellow, Department of Social Services Massachusetts:

**Viveka Prakash-Zawisza, MD, MBA, MS**, Senior Associate Medical Director and Care Delivery Innovation, MassHealth

**Gary Sing, PhD**, Senior Director of Strategic Initiatives at MassHealth

Minnesota:

**Nathan T. Chomilo, MD, FAAP, FACP**, Medicaid Medical Director, State of Minnesota

**Justine Nelson, PhD**, Research Scientist, Minnesota Department of Health and Human Services

Wisconsin:

**Jeffrey Huebner, MD, FAAP**, Chief Medical Officer, Division of Medicaid Services,  
Wisconsin Department of Health Services

Wyoming:

**Sarah Hoffdahl**, Grants & Contract Administration Manager, State of Wyoming

## Appendix B: Examples of State Medicaid SDOH Initiatives

State	Lever(s)	Elements of SDOH Initiative(s)
Arizona	MCO flexibility <sup>152, 153, 154</sup>	<ul style="list-style-type: none"> <li>• Requires MCOs to reinvest 6% of annual profits from Medicaid back in communities served. For example, plans may invest in food banks or housing.</li> <li>• Requires MCOs to use closed-loop referrals of members to social service organizations or support.</li> </ul>
California	MCO flexibility, 1115 Waivers, DSRIP <sup>155, 156, 157, 158</sup>	<ul style="list-style-type: none"> <li>• Through CalAIM, an 1115 Waiver, MCOs are encouraged to offer a variety of coordinated housing and support services including housing transition navigation services, housing deposits, housing tenancy and sustaining services, short-term post-hospitalization housing, medical respite, respite services, day habilitation programs, transition services, personal care and homemaker services, home modifications, medically tailored meals, sobering centers, and asthma remediation.</li> <li>• Through the Whole Person Care 1115 Waiver pilot, beneficiaries receive care coordination and other services not covered by Medi-Cal to address medical, behavioral health, and social needs including housing, employment, substance use services, and medical respite services.</li> <li>• State Plan A 16-007 directs the state Medicaid program to utilize a housing navigator to develop relationships with housing agencies and permanent housing providers, including supportive housing providers, in order to refer and link Medicaid-eligible participants with community-based housing resources.</li> </ul>
Colorado	Case management, Plan requirements, SPA <sup>159, 160, 161, 162</sup>	<ul style="list-style-type: none"> <li>• Colorado provides targeted case management, assessments, and referrals to community services for individuals transitioning from incarceration.</li> <li>• Plans are required to submit a bi-annual report describing how contractors engaged members and community stakeholders in the Accountable Care Collaborative and report the number of population health educational outreach contacts in alignment with the Department's Population Management Framework. Plans must also establish relationships with Community organizations that provide resources such as food, housing, energy assistance, childcare, education, and job training, to promote the health of local communities and populations.</li> <li>• A State Plan Amendment (SPA) added case management services for individuals who are transitioning from an eligible nursing or care facility with intensive needs or who have recently transitioned to a community setting. These services support individuals to successfully</li> </ul>

		integrate into community living by facilitating linkages to needed assistance.
Connecticut	Delivery system reform, SPA <sup>163,164,165</sup>	<ul style="list-style-type: none"> <li>• Connecticut uses ASOs which use data to deliver more efficient and targeted care including through initiatives to address enrollee SDOH including housing, food security, and physical safety. Connecticut Medicaid's contractors may be required to assess enrollees for SDOH needs and connect enrollees to resources.</li> <li>• Connecticut Housing Engagement and Support Services is a Section 1915(i) SPA that provides pre-tenancy and tenancy supports, as well as rehabilitative, life skills, and care coordination services to individuals with chronic conditions who are experiencing homelessness and are eligible for state plan HCBS.</li> <li>• Community First Choice is a Section 1915(k) SPA that provides assistance to eligible individuals transitioning from an institution into a new household. Assistance may be in the form of certain furnishings, household necessities, pest control, or health accommodations.</li> </ul>
Illinois	MCO requirements <sup>166</sup>	<ul style="list-style-type: none"> <li>• MCOs are required to hire a staff person dedicated to population health initiatives. This staffer will be a liaison, responsible for all population health and related issues, including population health activities and coordination between behavioral health services.</li> </ul>
Kansas	MCO requirements <sup>167</sup>	<ul style="list-style-type: none"> <li>• Requires MCOs to implement value-based purchasing models that expand service coordination, increase employment and provide better outcomes for foster children.</li> </ul>
Kentucky	MCO flexibility <sup>168</sup>	<ul style="list-style-type: none"> <li>• Humana Healthy Horizons provides internet infrastructure, internet education, and telehealth services to residents of a county in Kentucky.</li> <li>• Medicaid MCOs WellCare and Kentucky Homeplace funds gas cards for rural members in Eastern Kentucky to help with members' transportation needs.</li> <li>• Medicaid MCO Anthem provides limited donations to a nonprofit that distributes nutritious food and meals.</li> </ul>
Louisiana	MCO flexibility, MCO requirements <sup>169,170</sup>	<ul style="list-style-type: none"> <li>• MCO Aetna BetterHealth of Louisiana has invested in community-based organizations and services including a mobile hygiene unit to increase care access for pregnant women.</li> <li>• MCOs are required to reimburse providers for SDOH screening and submitting applicable diagnosis codes (Z codes) on claims.</li> </ul>

Maine	Case management, SPA <sup>171</sup>	<ul style="list-style-type: none"> <li>Beneficiaries with opioid use disorders or behavioral health disorders may be integrated into health homes that provide screenings and referrals for social needs. An approved SPA allows for services through health homes that screen for beneficiaries' housing needs and provide coordination of resources that help participants in accessing and maintaining safe and affordable housing.</li> </ul>
Maryland	SPA <sup>172</sup>	<ul style="list-style-type: none"> <li>Through a 1915(c) SPA, Maryland provides support services to participants with developmental disabilities and their families to enable participants to work toward self-determination, independence, productivity, integration, and inclusion in all facets of community life across their lifespans.</li> </ul>
Massachusetts	Capitation rate adjustment, Value-added services <sup>173,174</sup>	<ul style="list-style-type: none"> <li>Massachusetts sets capitation rates based on SDOH data by zip code considering stress scores, housing security, mental illness, and disability.</li> <li>Plans for dual eligibles are encouraged to provide housing-related services like housing search assistance, home modifications, and transition costs.</li> </ul>
Michigan	MCO flexibility <sup>175,176</sup>	<ul style="list-style-type: none"> <li>Mandates that MCOs employ at least one community health worker per 20,000 beneficiaries to coordinate access to social services tailored to the needs of community members in terms of cultural and linguistic competency.</li> </ul>
Minnesota	Capitation rate adjustment, SPA <sup>177,178</sup>	<ul style="list-style-type: none"> <li>State adjusts population-based payments to ACOs based on SDOH factors of members including homelessness, mental illness, substance use disorders, past incarceration, and child protection involvement.</li> <li>The Community Supports Waiver is a 1915(i) SPA that provides people with disabilities or at risk of homelessness with housing stabilization services including those that help people plan for, find, and move into homes or maintain housing.</li> </ul>
New Mexico	MCO flexibility <sup>179</sup>	<ul style="list-style-type: none"> <li>Requires that plans maintain a supportive housing specialist to work with members to assess housing needs and to identify appropriate resources to obtain housing and stay housed</li> </ul>
North Carolina	1115 Waiver <sup>180,181,182,183,184</sup>	<ul style="list-style-type: none"> <li>Through the Healthy Opportunities 1115 Waiver, Medicaid funds can be used for case management and other services to address enrollee needs related to housing, food, transportation, and interpersonal safety.</li> <li>The North Carolina Medicaid Reform Demonstration covers services to improve health-related needs for Medicaid beneficiaries including home repair and remediation services.</li> </ul>

Ohio	MCO flexibility, MCO requirements <sup>185,186</sup>	<ul style="list-style-type: none"> <li>• Ohio-based MCOs partner to provide funding to food banks in beneficiary service areas.</li> <li>• MCOs must reimburse providers for SDOH screening and submitting applicable diagnosis codes (Z codes) on claims.</li> </ul>
Oklahoma	MCO requirements <sup>187</sup>	<ul style="list-style-type: none"> <li>• MCOs must have Health Equity Representatives to engage in improvement initiatives to reduce adverse health outcomes among enrollees, determine the root cause of inequities, develop targeted interventions and measures, and collect and analyze data to track progress in disparity reduction efforts.</li> </ul>
Oregon	1115 Waiver <sup>188</sup>	<ul style="list-style-type: none"> <li>• The Social Needs Screening and Referral measure incentivize managed care plans to measure and address health-related social needs through assessments and connections to community services.</li> </ul>
Rhode Island	Delivery system reform, MCO incentives <sup>189,190,191</sup>	<ul style="list-style-type: none"> <li>• Medicaid MCOs sub-contract with integrated provider organizations called Accountable Entities which must screen for SDOH like housing, food security, safety, education, transportation, and employment and build capacity to address members' SDOH needs.</li> <li>• MCOs earn incentives for conducting screenings, home visits, education, and other programming to address lead poisoning in children.</li> </ul>
Tennessee	MCO requirements <sup>192</sup>	<ul style="list-style-type: none"> <li>• MCOs must submit a monthly Member Experience Report with assessments of members looking to make housing transitions that include but are not limited to, transition wait times, transition barriers, monthly income amounts, housing options chosen, and counties chosen for transition.</li> <li>• MCOs must hire a staff person to oversee housing and long-term support programs. The housing specialist must work with the housing agencies to help develop and access affordable housing services for members receiving eligible support services and must educate other Medicaid staff on housing coordination services.</li> </ul>
Washington	1115 Waivers, MCO requirements <sup>193,194,195</sup>	<ul style="list-style-type: none"> <li>• The Accountable Communities of Health 1115 Waiver encourages coordination between healthcare partners and community-based organizations that provide social support services that address the social determinants of health.</li> <li>• Washington partners with FQHCs that administer Health Care for the Homeless programs to provide supportive housing and supported employment support to eligible participants.</li> <li>• The Foundational Community Supports 1115 Waiver aims to integrate behavioral health into the larger healthcare system and to address housing and employment needs as SDOH.</li> </ul>

Wisconsin	MCO requirements <sup>196</sup>	• Medicaid MCOs must screen members for SDOH including access to housing, utilities, transportation, and food. MCOs must use screening data to determine the needs of their beneficiary populations based on demographic and SDOH characteristics.
-----------	---------------------------------	--



## Endnotes

---

<sup>1</sup> February 2023 Medicaid & CHIP Enrollment Data Highlights. Centers for Medicare and Medicaid Services. February 2023. Updated May 30, 2023. [https://data.medicaid.gov/dataset/6165f45b-ca93-5bb5-9d06-db29c692a360/data?conditions\[0\]\[property\]=report\\_date&conditions\[0\]\[value\]=2023-02-01&conditions\[0\]\[operator\]=%3D&conditions\[1\]\[property\]=preliminary\\_updated&conditions\[1\]\[value\]=P&conditions\[1\]\[operator\]=%3D](https://data.medicaid.gov/dataset/6165f45b-ca93-5bb5-9d06-db29c692a360/data?conditions[0][property]=report_date&conditions[0][value]=2023-02-01&conditions[0][operator]=%3D&conditions[1][property]=preliminary_updated&conditions[1][value]=P&conditions[1][operator]=%3D)

<sup>2</sup> Centers for Medicare and Medicaid Services. Who Enrolls in Medicaid & CHIP? Updated April 2021. <https://www.medicaid.gov/state-overviews/scorecard/who-enrolls-medicaid-chip/index.html>

<sup>3</sup> Pearson WS, Spicknall IH, Cramer Y, Jenkins WD. Medicaid coverage of sexually transmitted disease service visits. *Am J Prev Med.* 2019; 57(1):51-56.

<sup>4</sup> World Health Organization. Social Determinants of Health. Accessed June 12, 2023. [https://www.who.int/health-topics/social-determinants-of-health#tab=tab\\_1](https://www.who.int/health-topics/social-determinants-of-health#tab=tab_1)

<sup>5</sup> *Id.*

<sup>6</sup> Healthy People 2030. Social Determinants of Health. Accessed June 12, 2023. <https://health.gov/healthypeople/priority-areas/social-determinants-health>

<sup>7</sup> Hogben, M, & Leichter, J S. Social Determinants and Sexually Transmitted Disease Disparities. *Sexually Transmitted Diseases.* 2008;35(12):S13–S18. <http://www.jstor.org/stable/44969627>

<sup>8</sup> Harling, G, Subramanian, S, Bärnighausen, T, et al. Socioeconomic disparities in sexually transmitted infections among young adults in the United States: examining the interaction between income and race/ethnicity. *Sexually transmitted diseases.* 2013;40(7):575–581. <https://doi.org/10.1097/OLQ.0b013e31829529cf>

<sup>9</sup> Jilani, MH, Javed, Z, Yahya, T, et al.. Social Determinants of Health and Cardiovascular Disease: Current State and Future Directions Towards Healthcare Equity. *Current atherosclerosis reports.* 2021; 23(9): 55. <https://doi.org/10.1007/s11883-021-00949-w>

<sup>10</sup> Whitman A, De Lew N, Chappel A, et al. Addressing social determinants of health: Examples of successful evidence-based strategies and current federal efforts. ASPE. Accessed June 12, 2023. <https://aspe.hhs.gov/reports/sdoh-evidence-review>

<sup>11</sup> Harling, G, Subramanian, S, Bärnighausen, T., *supra* note 8. <https://doi.org/10.1097/OLQ.0b013e31829529cf>

<sup>12</sup> Hogben, M, & Leichter, J S., *supra* note 7.

<sup>13</sup> *Id.*

<sup>14</sup> Scheidell, JD, Beau De Rochars, VM, et al. Socioeconomic Vulnerability and Sexually Transmitted Infection Among Pregnant Haitian Women. *Sexually transmitted diseases.* 2018;45(9): 626–631. <https://doi.org/10.1097/OLQ.0000000000000861>

<sup>15</sup> STD Health Equity. Centers for Disease Control and Prevention. March 2, 2020. Accessed June 12, 2023. <https://www.cdc.gov/std/health-disparities/default.htm>

<sup>16</sup> *Id.*

<sup>17</sup> Jilani, MH, Javed, Z, Yahya, T, et al. *supra* note 9.

<sup>18</sup> Marshall BD, Kerr T, Shoveller JA, Patterson TL, Buxton JA, Wood E. Homelessness and unstable housing associated with an increased risk of HIV and STI transmission among street-involved youth. *Health Place.* 2009;15(3):753-760. doi:10.1016/j.healthplace.2008.12.005

<sup>19</sup> Widman L, Noar SM, Golin CE, Willoughby JF, Crosby R. Incarceration and unstable housing interact to predict sexual risk behaviours among African American STD clinic patients. *Int J STD AIDS.* 2014;25(5):348-354. doi:10.1177/0956462413505999

<sup>20</sup> German D, Latkin CA. Social stability and HIV risk behavior: evaluating the role of accumulated vulnerability. *AIDS Behav.* 2012;16(1):168-178. doi:10.1007/s10461-011-9882-5

<sup>21</sup> Davey-Rothwell MA, Latimore A, Hulbert A, Latkin CA. Sexual networks and housing stability. *J Urban Health.* 2011;88(4):759-766. doi:10.1007/s11524-011-9570-9

- 
- <sup>22</sup> Newmyer L, Evans M, Graif C. Socially Connected Neighborhoods and the Spread of Sexually Transmitted Infections. *Demography*. 2022;59(4):1299-1323. doi:10.1215/00703370-10054898
- <sup>23</sup> Tsai AC. Home foreclosure, health, and mental health: a systematic review of individual, aggregate, and contextual associations. *PLoS One*. 2015;10(4):e0123182. Published 2015 Apr 7. doi:10.1371/journal.pone.0123182
- <sup>24</sup> Satcher D, Okafor M, Dill LJ. Impact of the Built Environment on Mental and Sexual Health: Policy Implications and Recommendations. ISRN Public Health. 2012. <http://proxygw.wrlc.org/login?url=https://www-proquest-com.proxygw.wrlc.org/scholarly-journals/impact-built-environment-on-mental-sexual-health/docview/1038933940/se-2>
- <sup>25</sup> Newmyer L, Evans M, Graif C, *supra* note 22.
- <sup>26</sup> Desmond M, Gromis A, Edmonds L, Hendrickson J, Krywokuski K, Leung L, Porton A. Eviction Lab National Database: Version 1.0. Princeton: Princeton University; 2018. Available from: [www.evictionlab.org](http://www.evictionlab.org). Accessed April 11, 2018.
- <sup>27</sup> Niccolai LM, Blankenship KM, Keene DE. Eviction From Renter-occupied Households and Rates of Sexually Transmitted Infections: A County-level Ecological Analysis. *Sex Transm Dis*. 2019;46(1):63-68. doi: 10.1097/OLQ.0000000000000904.
- <sup>28</sup> Desmond M. Heavy is the House: Rent Burden among the American Urban Poor. *Int J Urban Reg Res*. 2018;42:160-170. doi: 10.1111/1468-2427.12529
- <sup>29</sup> Saboe-Wounded Head L, Desmond M. Evicted: Poverty and Profit in the American City. New York, NY: Crown Publishers; 2016. ISBN: 978-0-553-44743-9. *Fam Consum Sci Res J*. 2017;46:195-197. doi: 10.1111/fcsr.12240
- <sup>30</sup> Health Care Access. Health Care Access - MU School of Medicine. Accessed June 12, 2023. <https://medicine.missouri.edu/centers-institutes-labs/health-ethics/faq/health-care-access>
- <sup>31</sup> *Id.*
- <sup>32</sup> Addressing disparities in STI screening with at-home testing. NACo. March 1, 2023. Accessed June 12, 2023. <https://www.naco.org/blog/addressing-disparities-sti-screening-home-testing>
- <sup>33</sup> *Id.*
- <sup>34</sup> *Id.*
- <sup>35</sup> *Id.*
- <sup>36</sup> *Id.*
- <sup>37</sup> Haley, DF, Edmonds, A, Belenky, N, et al. Neighborhood Health Care Access and Sexually Transmitted Infections Among Women in the Southern United States: A Cross-Sectional Multilevel Analysis. *Sexually transmitted diseases*. 2018;45(1):19–24. <https://doi.org/10.1097/OLQ.0000000000000685>
- <sup>38</sup> *Id.*
- <sup>39</sup> *Id.*
- <sup>40</sup> Scheidell, JD, Beau De Rochars, VM, Séraphin, MN, et al., *supra* note 14.
- <sup>41</sup> Banks, DE, Hensel, DJ, Zapolski, TCB. Integrating Individual and Contextual Factors to Explain Disparities in HIV/STI Among Heterosexual African American Youth: A Contemporary Literature Review and Social Ecological Model. *Arch Sex Behav*. 2020;49:1939–1964. <https://doi.org/10.1007/s10508-019-01609-6>
- <sup>42</sup> Scheidell, JD, Beau De Rochars, VM, Séraphin, MN, et al. *supra* note 14.
- <sup>43</sup> Comprehensive Sexuality Education. ACOG. November 2016. Accessed June 12, 2023. <https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2016/11/comprehensive-sexuality-education>
- <sup>44</sup> Craig-Kuhn, MC, Schmidt, N, Lederer, A, et al. Sex education and STI fatalism, testing and infection among young African American men who have sex with women. *Sex education*. 2021;21(4): 404–416. <https://doi.org/10.1080/14681811.2020.1809369>

- 
- <sup>45</sup> Sul, S, Ferreira, L, Maia, AC, et al. Sexually Transmitted Infections and Health Literacy: A Community-Based Preventive Program. *Journal of primary care & community health*, 2023;14:21501319231159973. <https://doi.org/10.1177/21501319231159973>
- <sup>46</sup> Rakhshae, Z, Maasoumi, R, Nedjat, S, et al. Sexual Health Literacy, a Strategy for the Challenges of Sexual Life of Infertile Women: A Qualitative Study. *Galen medical journal*. 2020;9: e1862. <https://doi.org/10.31661/gmj.v9i0.1862>
- <sup>47</sup> Sul, S., Ferreira, L., Maia, A. C., et al., *supra* note 45.
- <sup>48</sup> Health Literacy Reports And Publications. U.S. Department of Health and Human Services. Accessed June 12, 2023. <https://www.hhs.gov/surgeongeneral/reports-and-publications/health-literacy/index.html#:~:text=Health%20literacy%20is%20key%20to,have%20proficient%20health%20literacy%20skills>
- <sup>49</sup> Scheidell, JD, Beau De Rochars, VM, Séraphin, MN, et al., *supra* note 14.
- <sup>50</sup> Craig-Kuhn, MC, Schmidt, N, Lederer, A, et al., *supra* note 44.
- <sup>51</sup> Grant J, O'Neill M, Petersen B, et al. Our Built and Natural Environments: A Technical Review of the Interactions between Land Use, Transportation, and Environmental Quality. U.S. Environmental Protection Agency. Updated July 8, 2021. Accessed June 12, 2023. <https://www.epa.gov/smartgrowth/our-built-and-natural-environments>
- <sup>52</sup> Du Bois WEB. The Health and Physique of the Negro American. *American journal of public health*. 2003;93(2): 272-276. <https://doi.org/10.2105/ajph.93.2.272>
- <sup>53</sup> Morello-Frosch R, Pastor M, Sadd J, Environmental justice and Southern California's "riscscape" the distribution of air toxics exposures and health risks among diverse communities. *Urban Affairs Review*. 2001;36(4):551-578. <https://doi.org/10.1177/10780870122184993>
- <sup>54</sup> Wilson S, Hutson M, Mujahid M. How planning and zoning contribute to inequitable development, neighborhood health, and environmental injustice. *Environmental Justice*. 2008;1(4): 211-216. <https://doi.org/10.1089/env.2008.0506>
- <sup>55</sup> Tapp, J, & Hudson, T. Sexually Transmitted Infections Prevalence in the United States and the Relationship to Social Determinants of Health. *The Nursing clinics of North America*. 2020;55(3): 283-293. <https://doi.org/10.1016/j.cnur.2020.05.001>
- <sup>56</sup> Satcher D, Okafor M, Dill LJ, *supra* note 24.
- <sup>57</sup> Niccolai LM, Blankenship KM, Keene DE, *supra* note 27.
- <sup>58</sup> Tapp, J, & Hudson, T, *supra* note 55.
- <sup>59</sup> Satcher D, Okafor M, Dill LJ, *supra* note 24.
- <sup>60</sup> C. Watkins-Hayes, L. Pittman, and J. Beaman, "Dying from" to "Living with" HIV/AIDS: Framing Institutions and the Coping Processes of Infected Black Women, Department of Sociology, Northwestern University, Evanston, Ill, USA, 2011.
- <sup>61</sup> Baker JL, Brawner B, Cederbaum JA, White S, Davis ZM, Brawner W, Jemmott LS. Barbershops as venues to assess and intervene in HIV/STI risk among young, heterosexual African American men. *Am J Mens Health*. 2012 Sep;6(5):368-82. doi: 10.1177/1557988312437239. Epub 2012 Mar 7. PMID: 22398991.
- <sup>62</sup> Wilson TE, Fraser-White M, Williams KM, Pinto A, Agbetor F, Camilien B, Henny K, Browne RC, Gousse Y, Taylor T, Brown H, Taylor R, Joseph MA. Barbershop Talk With Brothers: using community-based participatory research to develop and pilot test a program to reduce HIV risk among Black heterosexual men. *AIDS Educ Prev*. 2014 Oct;26(5):383-97. doi: 10.1521/aeap.2014.26.5.383. PMID: 25299804; PMCID: PMC4208304.
- <sup>63</sup> National Academies of Sciences, Engineering, and Medicine; Health and Medicine Division; Board on Population Health and Public Health Practice; Committee on Prevention and Control of Sexually Transmitted Infections in the United States. Sexually Transmitted Infections: Adopting a Sexual Health Paradigm. Crowley JS, Geller AB, Vermund SH, editors. Washington (DC): National Academies Press (US); 2021 Mar 24. PMID: 34432397.

- 
- <sup>64</sup> CDC, Special Focus Profiles: STDs in Adolescents and Young Adults, U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Atlanta, Ga, USA, 2010.
- <sup>65</sup> K. L. Brewster, “Neighborhood context and the transition to sexual activity among young black women,” *Demography*, vol. 31, no. 4, pp. 603–614, 1994.
- <sup>66</sup> A. Y. Akers, M. R. Muhammad, and G. Corbie-Smith, “‘When you got nothing to do, you do somebody’: a community’s perceptions of neighborhood effects on adolescent sexual behaviors,” *Social Science and Medicine*, vol. 72, no. 1, pp. 91–99, 2011.
- <sup>67</sup> D. L. Lang, L. F. Salazar, R. A. Crosby, R. J. DiClemente, L. K. Brown, and G. R. Donenberg, “Neighborhood environment, sexual risk behaviors and acquisition of sexually transmitted infections among adolescents diagnosed with psychological disorders,” *American Journal of Community Psychology*, vol. 46, no. 3, pp. 303–311, 2010.
- <sup>68</sup> DeChants, J.P., Green, A.E., Price, M.N., & Davis, C.K. 2021. Homelessness and Housing Instability Among LGBTQ Youth. West Hollywood, CA The Trevor Project. <https://www.thetrevorproject.org/wp-content/uploads/2022/02/Trevor-Project-Homelessness-Report.pdf>
- <sup>69</sup> D. L. Lang, L. F. Salazar, R. A. Crosby, R. J. DiClemente, L. K. Brown, and G. R. Donenberg, *supra* note 67.
- <sup>70</sup> Amiri S, Pham CD, Amram O, Alcover KC, Oluwoye O, Bravo L, Sixberry M, McDonnell MG, Roll JM, Fresco A. Proximity to Screening Site, Rurality, and Neighborhood Disadvantage: Treatment Status among Individuals with Sexually Transmitted Infections in Yakima County, Washington. *Int J Environ Res Public Health*. 2020 Apr 14;17(8):2679. doi: 10.3390/ijerph17082679. PMID: 32295243; PMCID: PMC7215758.
- <sup>71</sup> A. Y. Akers, M. R. Muhammad, and G. Corbie-Smith, *supra* note 66.
- <sup>72</sup> Newmyer, L, Evans, M, Graif, C, *supra* note 22.
- <sup>73</sup> Jiskrova GK, & Vazsonyi AT. Multi-contextual influences on adolescent pregnancy and sexually transmitted infections in the United States. *Social Science & Medicine*. 2019;224: 28–36. doi: 10.1016/j.socscimed.2019.01.024
- <sup>74</sup> Ellen JM, Jennings JM, Meyers T, Chung SE, & Taylor R . Perceived social cohesion and prevalence of sexually transmitted diseases. *Sexually Transmitted Diseases*. 2004;31(2): 117–122. doi:10.1097/01.OLQ.0000110467.64222.61
- <sup>75</sup> Kerrigan D, Witt S, Glass B, Chung S, et al. Perceived neighborhood social cohesion and condom use among adolescents vulnerable to HIV/STI. *AIDS and Behavior*. 2006;10(6): 723–729. doi:10.1007/s10461-006-9075-9
- <sup>76</sup> Arcaya MC, Graif C, Waters MC, et al.. Health selection into neighborhoods among families in the Moving to Opportunity Program. *American Journal of Epidemiology*. 2016;183(2): 130–137. doi:10.1093/aje/kwv189
- <sup>77</sup> Van Ham M, Boschman S, Vogel M. Incorporating neighborhood choice in a model of neighborhood effects on income. *Demography*. 2018;55(3): 1069–1090. doi:10.1007/s13524-018-0672-9
- <sup>78</sup> Newmyer L, Evans M, Graif C, *supra* note 22.
- <sup>79</sup> *Id.*
- <sup>80</sup> Camhi N, Mistak D, Wachino V. Medicaid’s Evolving Role in Advancing the Health of People Involved in the Justice System. The Commonwealth Fund. November 18, 2020. Accessed June 12, 2023. <https://doi.org/10.26099/903e-r786>
- <sup>81</sup> Workowski KA, Bachmann LH, Chan PA, et al. Sexually Transmitted Infections Treatment Guidelines, 2021 Jul 23. *MMWR. Recommendations and reports : Morbidity and mortality weekly report. Recommendations and reports*. 2021;70(4):1-187. <https://doi.org/10.15585/mmwr.rr7004a1>
- <sup>82</sup> Thomas JC, Levandowski BA, Isler MR, Torrone E, Wilson G. Incarceration and sexually transmitted infections: a neighborhood perspective. *J Urban Health*. 2008;85(1):90-99. doi:10.1007/s11524-007-9231-1

- 
- <sup>83</sup> Vicente-Alcalde N, Ruescas-Escolano E, Harboe ZB, et al. Vaccination Coverage among Prisoners: A Systematic Review. *International journal of environmental research and public health*. 2020;17(20):7589. <https://doi.org/10.3390/ijerph17207589>
- <sup>84</sup> Behind Bars II: Substance Abuse and America's Prison Population. U.S. Department of Justice Office of Justice Programs. February 2010. Accessed June 12, 2023. <https://www.ojp.gov/ncjrs/virtual-library/abstracts/behind-bars-ii-substance-abuse-and-americas-prison-population>
- <sup>85</sup> Khan MR, Scheidell JD, Golin CE, et al. Dissolution of Committed Partnerships during Incarceration and STI/HIV-Related Sexual Risk Behavior after Prison Release among African American Men. *J Urban Health*. 2018 Aug;95(4):479-487. doi: 10.1007/s11524-018-0274-2
- <sup>86</sup> Beckwith CG, Zaller ND, Fu JJ, Montague BT, Rich JD. Opportunities to diagnose, treat, and prevent HIV in the criminal justice system. *J Acquir Immune Defic Syndr*. 2010 Dec;55 Suppl 1(Suppl 1):S49-55. doi: 10.1097/QAI.0b013e3181f9c0f7.
- <sup>87</sup> Springer SA, Pesanti E, Hodges J, et al. Effectiveness of antiretroviral therapy among HIV-infected prisoners: reincarceration and the lack of sustained benefit after release to the community. *Clin Infect Dis*. 2004;38(12):1754-1760. doi:10.1086/421392
- <sup>88</sup> Knittel AK, Lorvick J. Self-reported sexually-transmitted infections and criminal justice involvement among women who use drugs. *Addict Behav Rep*. 2019 Sep 11;10:100219. doi: 10.1016/j.abrep.2019.100219.
- <sup>89</sup> Khan MR, Behrend L, Adimora AA, et al. Dissolution of primary intimate relationships during incarceration and implications for post-release HIV transmission. *J Urban Health*. 2011 Apr;88(2):365-75. doi: 10.1007/s11524-010-9538-1.
- <sup>90</sup> Wiehe, SE, Rosenman, MB, Aalsma, MC, et al. Epidemiology of Sexually Transmitted Infections Among Offenders Following Arrest or Incarceration. *American journal of public health*, 2015;105(12):e26–e32. <https://doi.org/10.2105/AJPH.2015.302852>
- <sup>91</sup> Brinkley-Rubinstein, L. Incarceration as a catalyst for worsening health. *Health & Justice*. 2013;1(3). <https://doi.org/10.1186/2194-7899-1-3>
- <sup>92</sup> Albertson EM, Scannell C, Ashtari N, et al. Eliminating Gaps in Medicaid Coverage During Reentry After Incarceration. *Am J Public Health*. 2020 Mar;110(3):317-321. doi: 10.2105/AJPH.2019.305400. Epub 2020 Jan 16.
- <sup>93</sup> Caraveo Y, Herod L, Coram D, Fields R. SB21-181 Equity Strategic Plan Address Health Disparities. Colorado General Assembly. 2021. Accessed June 12, 2023. <https://leg.colorado.gov/bills/sb21-181>
- <sup>94</sup> Department Health Equity Plan Fiscal Year 2022-23. Colorado Department of Health Care Policy & Financing. July 1, 2022. Accessed June 12, 2023. <https://hcpf.colorado.gov/sites/hcpf/files/2022%20HCPF%20Health%20Equity%20Plan.pdf>
- <sup>95</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>96</sup> Centers for Medicare & Medicaid Services. CMS Issues New Roadmap for States to Address the Social Determinants of Health to Improve Outcomes, Lower Costs, Support State Value-Based Care Strategies. January 7, 2021. Accessed June 12, 2023. <https://www.cms.gov/newsroom/press-releases/cms-issues-new-roadmap-states-address-social-determinants-health-improve-outcomes-lower-costs>
- <sup>97</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>98</sup> Asthma-Safe Homes Program. Wisconsin Department of Health Services. February 14, 2017. Accessed June 9, 2023. <https://www.dhs.wisconsin.gov/asthma/ashp.htm>
- <sup>99</sup> Housing Support Services Health Services Initiative. Wisconsin Department of Health Services. October 12, 2021. Accessed June 9, 2023. <https://www.dhs.wisconsin.gov/medicaid/housing-supports.htm>
- <sup>100</sup> Hinton E, & Stolyar L. Medicaid Authorities and Options to Address Social Determinants of Health (SDOH). August 5, 2021. Kaiser Family Foundation. Accessed June 14, 2023. <https://www.kff.org/medicaid/issue-brief/medicaid-authorities-and-options-to-address-social-determinants-of-health-sdoh/>

- 
- <sup>101</sup> Centers for Medicare & Medicaid Services. SHO# 21-001.
- <sup>102</sup> Hinton E, & Stolyar L., *supra* note 100.
- <sup>103</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicare.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>104</sup> Hinton E, Stolyar L., *supra* note 100.
- <sup>105</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>106</sup> Together for Better Medicaid. Medicaid Managed Care: Strategies to Address Social Determinants of Health & Health Equity. December 2021. Accessed June 14, 2023. [https://assets.togetherforbettermedicaid.org/media/tbm\\_hma\\_strategies-for-addressing-sdoh-and-health-equity-brief\\_dece](https://assets.togetherforbettermedicaid.org/media/tbm_hma_strategies-for-addressing-sdoh-and-health-equity-brief_dece)
- <sup>107</sup> Wyoming Medicaid Health Management (WYhealth). Wyoming Department of Health. Accessed May 15, 2023. <https://health.wyo.gov/healthcarefin/medicaid/wyoming-medicaid-health-management/>
- <sup>108</sup> State of Wyoming Pregnant by Choice, Family Planning Waiver Program. Wyoming's Family Planning Waiver (FPW) Program: Evaluation Design. April 2022. Accessed June 14, 2023. [https://health.wyo.gov/wp-content/uploads/2022/05/WY-FPW-Evaluation-Design\\_FINAL\\_Approved-April-2022.pdf](https://health.wyo.gov/wp-content/uploads/2022/05/WY-FPW-Evaluation-Design_FINAL_Approved-April-2022.pdf)
- <sup>109</sup> Hinton E, Stolyar L., *supra* note 100.
- <sup>110</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>111</sup> Housing programs and services. Minnesota Department of Human Services. Accessed June 5, 2023. <https://mn.gov/dhs/people-we-serve/adults/economic-assistance/housing/programs-and-services/>
- <sup>112</sup> MA Housing Stabilization Services. Housing Benefits 101. June 3, 2023. Accessed June 5, 2023. <https://mn.hb101.org/a/47/>
- <sup>113</sup> Medicaid Managed Care Tracker. Kaiser Family Foundation. Accessed June 13, 2023. <https://www.kff.org/statedata/collection/medicaid-managed-care-tracker/>
- <sup>114</sup> Centers for Medicare and Medicaid Services. SMD #: 23-001. January 4, 2023. Accessed June 5, 2023. <https://www.medicare.gov/federal-policy-guidance/downloads/smd23001.pdf>
- <sup>115</sup> Hinton E, Stolyar L., *supra* note 100.
- <sup>116</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>117</sup> Hinton E, Stolyar L., *supra* note 100
- <sup>118</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>119</sup> Together for Better Medicaid, *supra* note 106.
- <sup>120</sup> *Id.*
- <sup>121</sup> *Id.*
- <sup>122</sup> *Id.*
- <sup>123</sup> *Id.*
- <sup>124</sup> *Id.*
- <sup>125</sup> Utilization of Z Codes for Social Determinants of Health among Medicare Fee-for-Service Beneficiaries, 2019. Centers for Medicare and Medicaid Services. September 2021. Accessed June 14, 2023. <https://www.cms.gov/files/document/z-codes-data-highlight.pdf>
- <sup>126</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>127</sup> *Id.*

- 
- <sup>128</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>129</sup> Hinton E, Stolyar L., *supra* note 100
- <sup>130</sup> *Id.*
- <sup>131</sup> *Id.*
- <sup>132</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>133</sup> Hinton E, Stolyar L., *supra* note 100
- <sup>134</sup> Hinton E, Artiga S, Musumeci M, et al. A First Look at North Carolina’s Section 1115 Medicaid Waiver’s Healthy Opportunities Pilots. Kaiser Family Foundation. May 15, 2019. Accessed June 14, 2023. <https://www.kff.org/medicaid/issue-brief/a-first-look-at-north-carolinas-section-1115-medicaid-waivers-healthy-opportunities-pilots/>
- <sup>135</sup> Unite Us. Next Generation SDOH Strategy. Unite Us. November 11, 2022. Accessed June 14, 2023. <https://uniteus.com/blog/medicaids-next-generation-sdoh-strategy/>
- <sup>136</sup> Schneider A, Corcoran A. Medicaid Managed Care: SDOH, MCO, and MLR. Georgetown University Health Policy Institute, Center for Children and Families. March 10, 2022. Accessed June 14, 2023. <https://ccf.georgetown.edu/2022/03/10/medicaid-managed-care-sdoh-mco-and-mlr/>
- <sup>137</sup> California Reproductive Health Access Demonstration, submitted to HHS Secretary Xavier Becerra June 6, 2023. Available at <https://www.medicaid.gov/medicaid/section-1115-demonstrations/downloads/ca-CalRHAD-pa-06082023.pdf>
- <sup>138</sup> *Id.*
- <sup>139</sup> Connecticut Husky Health. Accessed May 25, 2023. <https://portal.ct.gov/HUSKY>
- <sup>140</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>141</sup> U.S. Department of Health and Human Services. 2020. Sexually Transmitted Infections National Strategic Plan for the United States: 2021–2025. Washington, DC.
- <sup>142</sup> Bailey A, Hayes K, Katch H, et al. Medicaid Is Key to Building a System of Comprehensive Substance Use Care for Low-Income People. Center on Budget and Policy Priorities. March 18, 2021. Accessed June 14, 2023. <https://www.cbpp.org/research/health/medicaid-is-key-to-building-a-system-of-comprehensive-substance-use-care-for-low>
- <sup>143</sup> U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation. Health Care Coverage and Care for Individuals Leaving Jail or Prison: Opportunities and Challenges. January 2023. Accessed June 12, 2023. <https://aspe.hhs.gov/sites/default/files/documents/d48e8a9fdd499029542f0a30aa78bfd1/health-care-reentry-transitions.pdf>
- <sup>144</sup> Centers for Medicare & Medicaid Services. HHS Approves California’s Medicaid and Children’s Health Insurance Program (CHIP) Demonstration Authority. January 26, 2023. Accessed June 12, 2023. <https://www.cms.gov/newsroom/press-releases/hhs-approves-californias-medicaid-and-childrens-health-insurance-plan-chip-demonstration-authority>
- <sup>145</sup> Incidence, Prevalence, and Cost of Sexually Transmitted Infections in the United States. Centers for Disease Control and Prevention, NCHHSTP Newsroom. March 16, 2022. Accessed June 14, 2023. <https://www.cdc.gov/nchhstp/newsroom/fact-sheets/std/STI-Incidence-Prevalence-Cost-Factsheet.html>
- <sup>146</sup> Share of Medicaid & CHIP Population by Age. Centers for Medicare and Medicaid Services. 2020. Accessed June 14, 2023. <https://www.medicaid.gov/state-overviews/scorecard/share-of-medicaid-chip-population-age/index.html>
- <sup>147</sup> Health Considerations for LGBTQ Youth. Centers for Disease Control and Prevention. December 20, 2019. Accessed June 14, 2023. <https://www.cdc.gov/healthyyouth/disparities/health-considerations-lgbtq-youth.htm>
- <sup>148</sup> McCann E, Brown M. Homelessness among youth who identify as LGBTQ+: A systematic review. *J Clin Nurs*. 2019;28(11-12):2061-2072. doi:10.1111/jocn.14818

- 
- <sup>149</sup> The Basic Facts About Children in Poverty. Center for American Progress. January 12, 2021. Accessed June 14, 2023. <https://www.americanprogress.org/article/basic-facts-children-poverty/>
- <sup>150</sup> Census Bureau Releases New 2020 Census Data on Age, Sex, Race, Hispanic Origin, Households and Housing. US Census Bureau. May 25, 2023. Accessed June 14, 2023. <https://www.census.gov/newsroom/press-releases/2023/2020-census-demographic-profile-and-dhc.html>
- <sup>151</sup> An Overview of Consent to Reproductive Health Services by Young People. Guttmacher Institute. June 1, 2023. Accessed June 14, 2023. <https://www.guttmacher.org/state-policy/explore/overview-minors-consent-law>
- <sup>152</sup> Hinton E, Stolyar L., *supra* note 100.
- <sup>153</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>154</sup> Atkeson A. Medicaid Strategies for Addressing Social Determinants of Health: Considerations from State Leaders for Improving Oral and Overall Health. National Academy for State Health Policy. May 24, 2021. Accessed June 14, 2023. <https://nashp.org/medicaid-strategies-for-addressing-social-determinants-of-health-considerations-from-state-leaders-for-improving-oral-and-overall-health/>
- <sup>155</sup> Hinton E, Stolyar L., *supra* note 100
- <sup>156</sup> AHIP. Health Insurance Providers Actions Concerning SDOH. March 21, 2023. Accessed June 14, 2023. <https://www.ahip.org/news/articles/health-insurance-providers-actions-concerning-sdoh>
- <sup>157</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>158</sup> California State Plan Amendment SPA#16-007. December 19, 2017. Accessed June 14, 2023. <https://www.medicaid.gov/sites/default/files/State-resource-center/Medicaid-State-Plan-Amendments/Downloads/CA/CA-16-007.pdf>
- <sup>159</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>160</sup> Health First Colorado Managed Care Contracts. Colorado Department of Health Care Policy and Financing. N.D. Accessed June 14, 2023. <https://hcpf.colorado.gov/health-first-colorado-managed-care-contracts>
- <sup>161</sup> Association of State and Territorial Health Officials. Impacting Social Determinants of Health Through Managed Care Contracts. October 13, 2022. Accessed June 14, 2023. <https://www.astho.org/topic/population-health-prevention/healthcare-access/medicaid/impacting-sdoh-through-managed-care-contracts/>
- <sup>162</sup> Colorado State Plan Amendment SPA #18-0021. January 17, 2019. Accessed June 14, 2023. <https://www.medicaid.gov/sites/default/files/State-resource-center/Medicaid-State-Plan-Amendments/Downloads/CO/CO-18-0021.pdf>
- <sup>163</sup> Hinton E, Stolyar L., *supra* note 100.
- <sup>164</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>165</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>166</sup> Association of State and Territorial Health Officials, *supra* note 161.
- <sup>167</sup> Hinton E, Stolyar L., *supra* note 100.
- <sup>168</sup> AHIP. Health Insurance Providers Actions Concerning SDOH. March 21, 2023. Accessed June 14, 2023. <https://www.ahip.org/news/articles/health-insurance-providers-actions-concerning-sdoh>
- <sup>169</sup> *Id.*
- <sup>170</sup> Together for Better Medicaid, *supra* note 106.



- 
- <sup>171</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>172</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>173</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. . [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>174</sup> Unite Us. Medicaid’s Next Generation SDoH Strategy. November 11, 2022. Accessed June 14, 2023. <https://uniteus.com/blog/medicaids-next-generation-sdoh-strategy/>
- <sup>175</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>176</sup> Association of State and Territorial Health Officials, *supra* note 106.
- <sup>177</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>178</sup> Minnesota State Plan Amendment SPA #18-008. August 1, 2019. Accessed June 14, 2023. <https://www.medicaid.gov/sites/default/files/State-resource-center/Medicaid-State-Plan-Amendments/Downloads/MN/MN-18-08.pdf>
- <sup>179</sup> Hinton E, Stolyar L., *supra* note 100.
- <sup>180</sup> AHIP. Health Insurance Providers Actions Concerning SDOH. March 21, 2023. <https://www.ahip.org/news/articles/health-insurance-providers-actions-concerning-sdoh>
- <sup>181</sup> Hinton E, Artiga S, Musumeci M, et al. A First Look at North Carolina’s Section 1115 Medicaid Waiver’s Healthy Opportunities Pilots. Kaiser Family Foundation. May 15, 2019. Accessed June 14, 2023. <https://www.kff.org/medicaid/issue-brief/a-first-look-at-north-carolinas-section-1115-medicaid-waivers-healthy-opportunities-pilots/>
- <sup>182</sup> Unite Us. Medicaid’s Next Generation SDoH Strategy. November 11, 2022. Accessed June 14, 2023. <https://uniteus.com/blog/medicaids-next-generation-sdoh-strategy/>
- <sup>183</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>184</sup> Schneider A, Corcoran A. Medicaid Managed Care: SDOH, MCO, and MLR. Georgetown University Health Policy Institute, Center for Children and Families. March 10, 2022. Accessed June 14, 2023. <https://ccf.georgetown.edu/2022/03/10/medicaid-managed-care-sdoh-mco-and-mlr/>
- <sup>185</sup> AHIP. Health Insurance Providers Actions Concerning SDOH. March 21, 2023. Accessed June 14, 2023. <https://www.ahip.org/news/articles/health-insurance-providers-actions-concerning-sdoh>
- <sup>186</sup> Together for Better Medicaid, *supra* note 106.
- <sup>187</sup> *Id.*
- <sup>188</sup> Unite Us. Medicaid’s Next Generation SDoH Strategy. November 11, 2022. Accessed June 14, 2023. <https://uniteus.com/blog/medicaids-next-generation-sdoh-strategy/>
- <sup>189</sup> Hinton E, Stolyar L., *supra* note 100.
- <sup>190</sup> MACPAC. Financing Strategies to Address the Social Determinants of Health in Medicaid. May 2022. Accessed June 14, 2023. [https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief\\_May-2022.pdf](https://www.macpac.gov/wp-content/uploads/2022/05/SDOH-Issue-Brief_May-2022.pdf)
- <sup>191</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>
- <sup>192</sup> Association of State and Territorial Health Officials, *supra* note 106.
- <sup>193</sup> Hinton E, Stolyar L., *supra* note 100.

---

<sup>194</sup> Centers for Medicare & Medicaid Services. SHO# 21-001. January 7, 2021. Accessed June 14, 2023. <https://www.medicaid.gov/federal-policy-guidance/downloads/sho21001.pdf>

<sup>195</sup> Association of State and Territorial Health Officials, *supra* note 106.

<sup>196</sup> *Id.*