Using the STATE OF BABIES YEARBOOK 2022 to Illuminate the Social Determinants of Health for Infants and Toddlers

Using the State of Babies Yearbook to Illuminate the Social Determinants of Health for Infants and Toddlers is a companion report to the *State of Babies Yearbook: 2022*, produced by ZERO TO THREE and Child Trends. The Yearbook is part of ZERO TO THREE's *Think Babies*™. ZERO TO THREE created *Think Babies* to make the potential of every baby a national priority. When we *Think Babies* and invest in infants, toddlers, and their families, we ensure a strong future for us all. Learn more at thinkbabies.org.

ZERO TO THREE works to ensure all infants and toddlers benefit from the family and community connections critical to their well-being and development. Since 1977, the organization has advanced the proven power of nurturing relationships by transforming the science of early childhood into helpful resources, practical tools and responsive policies for millions of parents, professionals, and policymakers.

The data, indicator analysis, and joint writing of this report are powered by Child Trends, the nation's leading nonprofit research organization focused exclusively on improving the lives and prospects of children, youth, and their families. For 40 years, decision makers have relied on the organization's rigorous research, unbiased analyses, and clear communications to improve public policies and interventions that serve children and families.

think babies™
Make their potential our priority.

Author credit: Kim Keating*, Yuko Ekyalongo**, Alison Sapp**, Sarah Heinemeier*, and Patricia Cole*

* ZERO TO THREE
Early connections last a lifetime

** Child TRENDS

Table of Contents

Executive Summary

The Social Determinants of Health (SDOH), which aid policymakers and practitioners in understanding the drivers of well-being for all people, are particularly important for infants and toddlers because health and development during this period are uniquely sensitive to babies' social and environmental context. As a nation, if we can improve the drivers of health at the earliest possible moment, we can improve the long-term outlook for health and well-being and prevent many problems along the way.

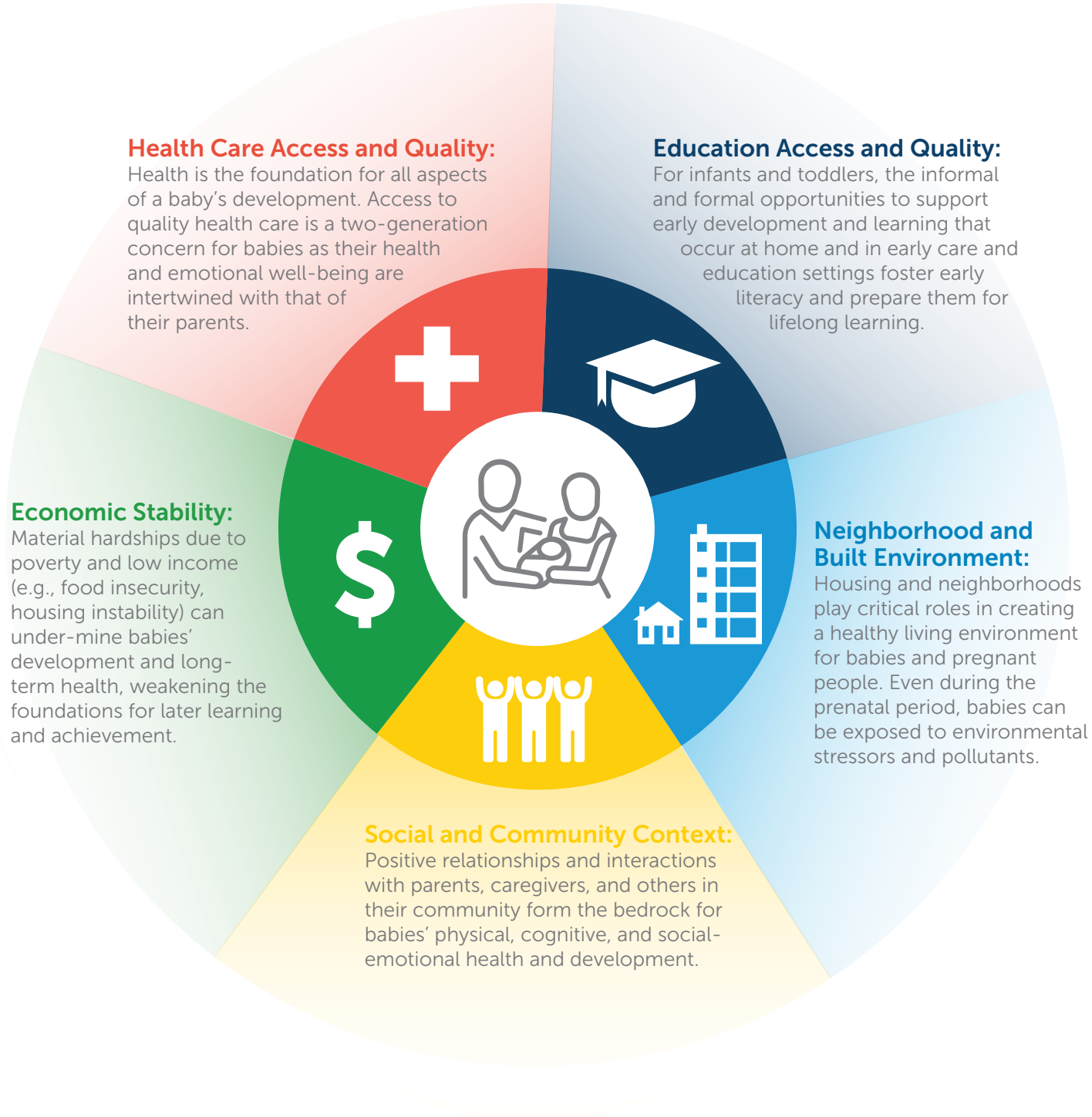
The SDOH as adopted by Healthy People 2030 consist of five domains affecting health: Health Care Access and Quality, Economic Stability, Education Access and Quality, Social and Community Context, and Neighborhood and Built Environment. However, the number of Healthy People 2030 goals specific to young children, particularly infants and toddlers, is somewhat limited.

In this report we use the *State of Babies Yearbook (Yearbook)* indicators to examine the extent to which the primary goals and objectives of the SDOH domains are being met for infants and toddlers. We intend to encourage and more fully inform efforts to address SDOH for very young children and advance their success.

The *Yearbook* provides data on indicators of well-being and related policy in ZERO TO THREE's three policy framework domains: Good Health, Strong Families, and Positive Early Learning Experiences. Aligning Yearbook indicators with SDOH domains provides a robust picture of the level of economic and social resources available to the nation's babies, with the added dimension that for babies, these factors shape not only health but also their overall foundational development.

In addition, the *Yearbook's* core focus on equity reveals many disparities when examined by race/ethnicity, income, and urbanicity, inviting a consideration of structural racism that is not explicitly acknowledged in the SDOH framework as a major contributing factor to health disparities. However, Healthy People 2030 and the SDOH framework do address the systems where racism is at work – such as housing, employment, and health care. As the complex interaction between income, race/ethnicity, and the history of racism shows, we must investigate historical, economic, and social contexts to understand root causes of the disparities that exist in specific indicators of well-being or in specific states – in other words, the drivers behind the SDOH.

After looking at *Yearbook* indicators in each SDOH domain we conclude that the SDOH for infants and toddlers show that while many are doing well, disparities raise significant concerns about the near-term development and long-term health of young children. Alignment of indicators within each SDOH domain can be viewed in each section of this report. Findings by domain include:



Health Care Access and Quality: For babies, health care becomes a two-generation concern as the health and emotional well-being of parents is intertwined with that of the baby. Yearbook data show disparities by race/ethnicity, income, and urbanicity in access to and receipt of prenatal care that places expectant parents' and their babies' health at risk. Similar disparities exist in preventive medical care for babies that can jeopardize their early development and subsequent health.

Economic Stability: Economic instability – including but not limited to experiencing poverty and low income – can undermine babies' development and long-term health, weakening foundations for all later learning. Yearbook insights regarding income and basic needs show that many babies experience economic conditions that can negatively affect their health and developmental outcomes.

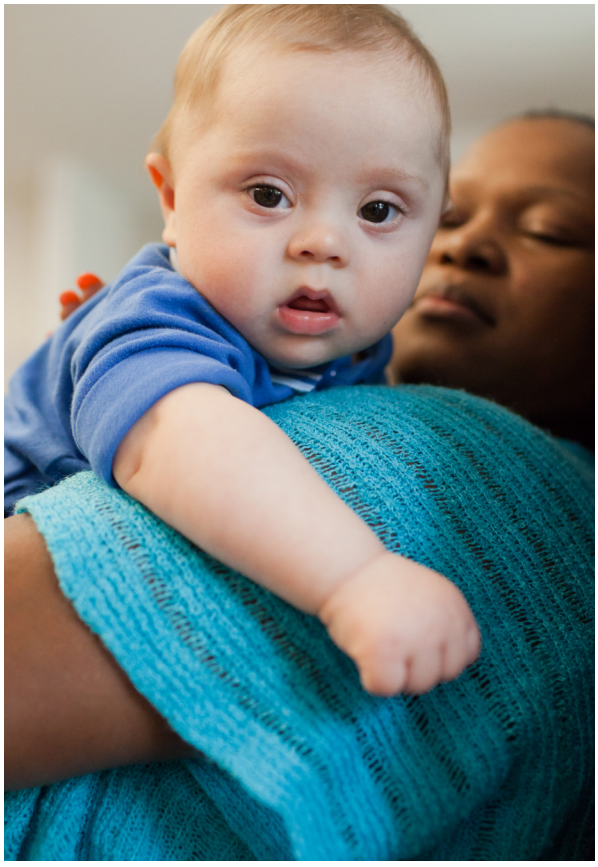
Education Access and Quality: For infants and toddlers, this domain relates to the informal and formal opportunities for early learning that occur at home and in early care and education settings that prepare them for lifelong learning. The *Yearbook* shows supports for providing these opportunities fall short, both at home and in early care and learning settings.

Social and Community Context: Positive relationships and interactions with parents, caregivers, and others in their community form the bedrock for babies' physical, cognitive, and social-emotional health throughout their lives. Yearbook data show families with babies are resilient. However, negative factors such as maternal depression, adverse childhood experiences (ACEs), and unsafe neighborhoods place cohesion within families and communities at risk.

Neighborhood and Built Environment: Housing and neighborhoods play critical roles in creating a healthy living environment for babies and pregnant people. Even during the prenatal period, babies are exposed to environmental stressors and pollutants. Although fewer Yearbook indicators are related to this domain, indirectly connected health indicators (e.g., preventive medical visits) suggest some states have considerable work to do to ensure children are being screened for health hazards such as lead; and basic need indicators (e.g., crowded housing) suggest quality, affordable, healthy housing options may not be available to many families with babies.

Like the SDOH domains, the issues confronting families are interrelated and require coordinated rather than siloed solutions. To successfully address these needs, there must be collaborative, cross-sector approaches to policy planning at federal, state, local, and community levels – and policies implemented must be comprehensive and integrated across the various systems. Additionally, parents should be engaged as trusted partners in all phases of developing solutions for their families and communities' SDOH needs. As experts on their babies and individuals with lived experience, parent voices are essential to shape policies and practices that achieve improved outcomes.

Achieving equity in SDOH requires broad change to address the many disparities that are apparent in the Yearbook data. It requires crafting policies that are informed by and responsive to the underlying causes of these inequities and continuous review of the policies' outcomes to determine if they are having a positive effect. In addition to implementing cross-cutting systems, several individual policy areas are fundamental to improving the health and developmental outcomes of all infants, toddlers, and their families:



- Access to integrated, affordable maternal, pediatric, and family health care, including Medicaid expansion, postpartum extension of Medicaid, and embedding developmental specialists in primary care
- Sufficient income to ensure and maintain a stable environment and lead to self-sufficiency, including Temporary Assistance for Needy Families (TANF) benefits reform and tax credits such as the Child Tax Credit (CTC) and the Earned Income Tax Credit (EITC)
- Time to bond and form healthy relationships with one's babies, including paid family and medical leave
- Strong social-emotional and mental health, through the expansion of Infant and Early Childhood Mental Health (IECMH) services
- Comprehensive early care and learning opportunities, including high-quality child care and expanded Early Head Start (EHS)
- Cross-cutting approaches and systems building, including home visiting, child development specialists in pediatric care, family resource centers, and community systems to strengthen families

Although Yearbook indicators help policymakers and advocates assess where babies stand on many elements of the SDOH, many gaps exist in the data available for analysis. We continue to call for better data collection and reporting as well as increased funding for reporting entities to ensure national data sets are updated on an annual basis.

Introduction

Decades of science make clear ***the early years matter***. Promoting the health and well-being of children during their first three years influences the strength of all aspects of their development that will sustain them throughout their lives.

Babies' brains grow faster in the first few years than any later point in life, forming more than one million new neural connections every second. Connections for functions such as vision, hearing, language, and cognition peak during the first three years.[1] Later, higher-level brain functions will be built on top of these foundational connections. Early experiences influence which connections are reinforced and which fall away unused, as well as whether this important foundation will be strong or fragile. Early childhood presents both a prime opportunity to positively influence the course of a young child's life and a window of vulnerability for falling behind.

Critical to development is a child and family's environment, including the conditions in which they live, learn, work, and play that affect a wide range of health risks and outcomes. When babies have good health and nutrition, nurturing relationships, and positive early learning experiences, those neural connections are stimulated and strengthened, laying a strong foundation for their future development. Without these essential supports, babies can face lifelong developmental, educational, social, and health challenges. When families lack access to key resources, a child's early years can become a time of vulnerability rather than potential. Chronic stress that children may experience from environmental factors such as unstable housing, material hardship, unhealthy neighborhoods, and parental stress or mental health issues can undermine brain development by unleashing hormones that constantly bathe the brain, weakening its architecture.

The need to understand the drivers of health and development for young children is evident. Applying the Yearbook indicators to the SDOH framework gives policymakers and practitioners this deeper understanding and more fully informs their efforts to address current conditions for babies and advance their success. Disaggregated views of data for several indicators also make clear the detrimental impacts of structural racism on SDOH for families and babies. Patterns of disparities across race/ethnicity and income underscore the need to focus on the underlying causes behind differences in SDOH and shape policies that promote equity. Throughout this report, we call attention to the costs of racism and systemic injustice, with the data depicting disproportionately negative outcomes for babies and families. In addition to the impact on families, these inequities lead to loss of productivity and increased public spending.[2]

Yearbook data also show that conditions for babies vary by state. Through in-depth state examples, where possible, we expand on the context of disparities at the state level to illustrate to local policymakers and practitioners how to take the complex historic and social context into account when addressing disparities in their communities. Although we cannot share the context for all disparities we highlight in this report, we urge policymakers, advocates, and practitioners to look deeply into the factors driving disparities in their states, including those at local and community levels.

The *State of Babies Yearbook*

The *Yearbook* provides national and state-by-state snapshots of the nation's babies and the families who raise them, based on more than 60 indicators of well-being and supportive policies in ZERO TO THREE's three policy framework areas: Good Health, Strong Families, and Positive Early Learning Experiences. First released in 2019, the *Yearbook* is designed to provide policymakers, advocates, and other stakeholders the data they need to: 1) understand and "tell the story" of infants and toddlers nationally and in their states; 2) compare states' progress for infants and toddlers, using a common set of indicators; and 3) identify indicators that reflect challenges and use the information to develop policies that help improve outcomes for young children.

State of Babies Yearbook Ranking Process

The *State of Babies Yearbook: 2022* provides a profile of each state and the District of Columbia's performance on key indicators in each of three policy framework domains: Good Health, Strong Families, and positive Learning Experiences. A transparent ranking process is used to group states into one of four tiers (G, R, O, and W) to provide a quick snapshot of how states compare at both domain and indicator levels. The tiers represent four groupings of states that are approximately equal in size and ordered from highest to lowest performing. A detailed description of the ranking process is provided in Appendix A.

The Social Determinants of Health Framework

In 2008, the World Health Organization (WHO) established the Commission on Social Determinants of Health, which urged governments across the world to address health inequities associated with the social conditions in which people live.[3] SDOH are defined as conditions in the environments in which people are born, live, learn, work, play, worship, and age that affect a wide range of health, functioning, and quality-of-life outcomes and risks. Examples of social determinants include transportation options, safe housing, access to healthy foods, and access to healthcare, among others.[4]

The Centers for Disease Control and Prevention (CDC) incorporates SDOH into its Healthy People 2030 initiative, grouping SDOH into five domains: Health Care Access and Quality, Economic Stability, Education Access and Quality, Social and Community Context, and Neighborhood and Built Environment. The SDOH framework establishes objectives for improving health outcomes for adults and children within each of these domains and is familiar to and widely used by policymakers and practitioners, even spurring the creation of a bipartisan Congressional caucus dedicated to addressing SDOH. The application of SDOH as a priority is increasingly seen in states' strategies to improve health outcomes, such as Michigan's requirement that Medicaid contracts include multiyear SDOH plans.[5] The number of objectives specific to young children is somewhat limited, although several directly or indirectly improve outcomes for infants and toddlers by addressing the root causes of negative outcomes and disparities. Examples include reducing the proportion of children with a parent or guardian who has served time in prison, increasing the proportion of parents who read to their children at least four times per week, increasing the proportion of pregnant parents who receive early and adequate prenatal care, and more.[6]

Explaining Our Terms: Babies, Children, Infants/Toddlers, Families, and Households

Throughout this report, we use the terms "babies," "young children," and "infants and toddlers" interchangeably, by which we mean children under age 3. We use these terms when we refer to an indicator that calculated the percentage of children under 3 with a certain circumstance (e.g., crowded housing). However, we use the term "families" when an indicator calculated the percentage of families with babies experiencing a certain circumstance (e.g., receiving a public benefit). Likewise, the term "households" is used when we calculated the percentage of households in a certain situation (e.g., experiencing low to very low food security). You can find indicators we refer to in this report along with their definitions in the *2022 Yearbook's Indicator Dictionary*.

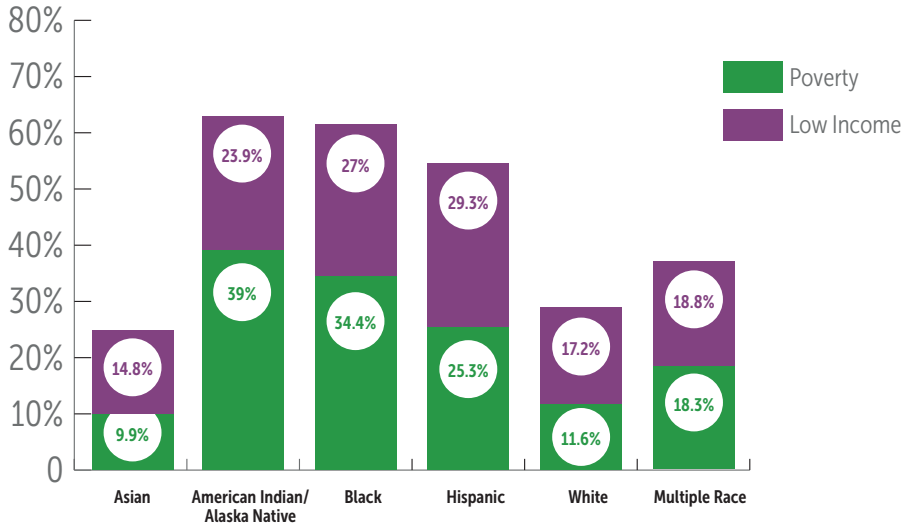
Structural Racism Impacts Health Outcomes

The American Medical Association defines structural racism as "the totality of ways in which societies foster racial discrimination through mutually reinforcing systems of housing, education, employment, earnings, benefits, credit, media, health care, and criminal justice."[7] Although many of these systems that reinforce racial discrimination are included in the Healthy People 2030 SDOH framework, the framework does not explicitly acknowledge structural racism as a major contributing factor to health disparities.[8,9,10] For example, discrimination, including both individual and structural, is only identified in the Social and Community Context domain. Yet structural racism may be the reason that people are experiencing recognized determinants, such as neighborhoods most impacted by environmental threats or less access to quality health care – in other words, the drivers of the SDOH. Many organizations now recognize the fundamental impact of structural racism. And notably, in 2019, the American Academy of Pediatrics referred to racism as "a core social determinant of health that is a driver of health inequities."[11]

Structural racism affects individual's experiences in health care and their health outcomes in various ways. For instance, implicit bias in clinical settings can decrease the quality of care, and increased stress levels experienced by people of color contribute to accelerated aging ("weathering").[12] The history of racism within the U.S. medical system (e.g., the Tuskegee Syphilis Study that left Black men untreated for syphilis for decades[13] and forced the sterilization of Black and American Indian and Alaska Native (AI/AN) women[14 15 16]) continues to affect the trust that communities of color have in the health care system. These factors contribute to persistent health disparities. Public awareness of maternal and child health disparities has substantially increased in recent decades. Over the past 15 years, Black and AI/AN birthing people[a] have consistently experienced pregnancy-related mortality at more than twice the national rate.[17,18] Sociodemographic factors such as age, education, and income do not fully explain this disparity.[19] However, systemic receipt of lower-quality care and inequitable treatment from providers are shared factors among birthing people of these races that can contribute to higher rates of mortality.[20]

a The terms "mother," "pregnant women," and "breastfeeding" are used throughout the Yearbook for consistency with the language used in the data sources. However, the authors acknowledge that "pregnant people" and "chest feeding" are more inclusive of individuals who may not identify with gendered terms. We will use more inclusive terms when making general statements.

INTERSECTIONALITY OF RACE/ETHNICITY AND INCOME Figure 1.



When interpreting the Yearbook's findings on disparities, it is important to consider the intersectionality of race and income (Figure 1) produced by past and present discriminatory practices that have limited access to financial resources, educational opportunities, and fair job and wage structures for families of color. The influence of this intersectionality is most evident in the disproportional percentages of AI/AN (62.9%), Black (61.4%), and Hispanic[b] (54.6%) babies living in families with low income or in poverty (see Box 2, Explaining Our Terms). Moreover, disparities reported in most health, social, and early learning outcomes for babies and their families are shaped by the persistent impacts of this relationship. For example, AI/AN, Black, and Hispanic babies, who are disproportionately more likely than their peers to live in families with low income or in poverty, are also more likely to experience housing instability, live in unsafe neighborhoods, and have at least one ACE during their critical first three years.

Despite the negative forces of structural racism and poverty, there are unique strengths in communities that drive positive outcomes. Generations of families in communities marginalized by structural inequities have relied on assets within their cultures that serve as protective factors and the foundation for resilience. Examples of these assets include the pivotal role of the church as the center of spiritual, civic, and practical support in the Black community, sustaining spiritual traditions and the role of elders in the AI/AN community, and the core value of familismo that places special emphasis on the family unit in the Hispanic community. Recognizing these and other traditional sources of strength and determining the extent to which they are meaningful in the lives of individual families can provide additional avenues for advancing the health and well-being of families with young children.

Explaining Our Terms: What we mean by babies living in families "in poverty," with "low income," and "above low income"

In poverty: Infants and toddlers living in families with incomes below 100% of the federal poverty level (FPL) ($25,750 a year for a family of four in 2019)

Low income: Infants and toddlers living in families with incomes between 100 and 199% of the FPL ($25,750 to $51,499 a year for a family of four in 2019)

Above low income: Infants and toddlers living in families with incomes at or above 200% of the FPL ($51,500 a year for a family of four in 2019)

b We acknowledge that there are more inclusive ways to reference people of Hispanic origins, such as Latine and Latinx, but we are using the term to remain in alignment with our data sources.

The Additional Influence of Geography on Disparities

Rurality is another factor that intersects with race and income when it comes to family and child well-being. Over the past decade, more than 100 rural hospitals closed, and more are at risk of future closure.[21] Many rural counties have lost hospital obstetrical services during this same period, affecting access to prenatal and postnatal care, as well as timely access to labor and delivery facilities.[22,23] Losing hospital-based obstetrical services increases the likelihood of giving birth outside of hospitals or giving birth at hospitals without an obstetric unit, which can lead to worse maternal and infant outcomes.[24,25,26] Overall, rural residents have an increased likelihood of severe maternal mortality and morbidity (i.e., health problems that result from pregnancy or birth) compared with urban residents.[27,28] Looking at racial disparities, more than one-half of the U.S. AI/AN population live in rural areas or small towns where access to obstetrical services is becoming increasingly limited,[29] and almost twice as many AI/AN pregnant people received late or no prenatal care compared with the national average, according to the *Yearbook*.[30] Counties with a higher proportion of non-Hispanic Black women of reproductive age and lower median household incomes had higher incidence of losing hospital obstetrical services.[31]

Throughout this report, we will describe the disparities that exist in the *Yearbook*'s findings between infants and toddlers of different racial and ethnic identities, income levels, and urbanicity. As the interaction between income and race/ethnicity and the history of racism shows, we must investigate historical, economic, and social context to understand why disparities exist for a specific indicator or in a specific state for certain populations. Although we cannot share the context for all of the disparities we highlight in this report, we urge policymakers and practitioners to look deeply into the factors driving disparities in their states, including those at local and community levels.

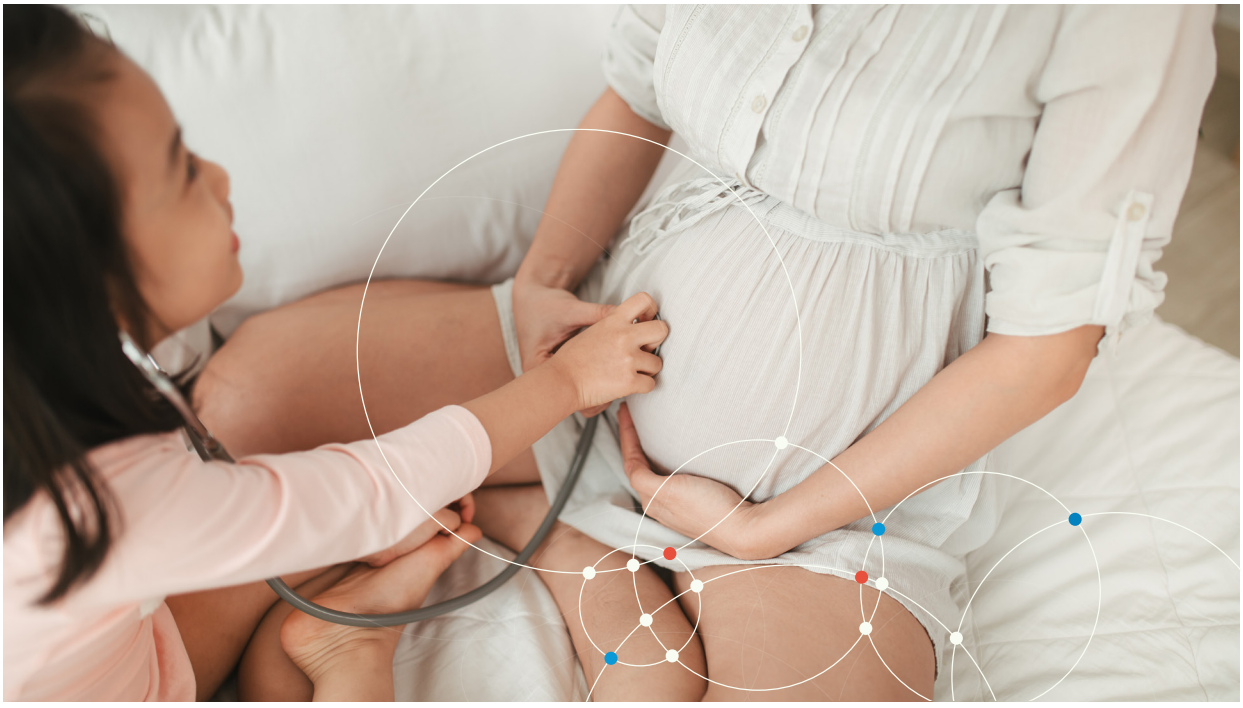
The *Yearbook* Illuminates an Understanding of SDOH for Babies

Each section that follows addresses a SDOH domain, describes why the domain is important for infants and toddlers, and outlines how the *Yearbook* indicators relate to the domain. To illustrate this relationship, we summarize the *Yearbook* indicators that are most closely aligned with the SDOH domain and provide an example of how the latest indicator findings can be interpreted using a SDOH lens for a selected state.

Health Care Access and Quality

The goal of the SDOH Health Care Access and Quality domain is to increase access to comprehensive, high-quality health care services. Infants and toddlers have a critical stake in the achievement of this goal. For babies, health care is a two-generation concern as the health and emotional well-being of parents is intertwined with that of the baby. Access and quality can determine birth outcomes that affect babies' development. Despite the central role of health in shaping the foundation for all aspects of baby's development, significant disparities exist in receipt of prenatal and preventive health care services as well as birth outcomes. *Yearbook* data show disparities by race/ethnicity, income, and urbanicity in access and receipt of early prenatal as well as preventive medical care for infants and toddlers that jeopardize the early development and long-term health of many babies as well as their parents. National and state policies can promote access through broad health insurance coverage as well as efforts to improve the quality of health care services for families with young children.

Healthy People 2030 objectives in the health domain address three areas that align with *Yearbook* indicators. These include ensuring access to health insurance coverage, access to primary care, and access to health care.[32] This domain also addresses the social-emotional and mental health of parents and babies, and early intervention for children with disabilities. Although most objectives in this domain focus on adults, several



are applicable to infants and toddlers and align with 16 *Yearbook* indicators. *Yearbook* data on health care coverage for pregnant people and receipt of maternal and child health care offers a more expansive view of infants, toddlers, and their families' health and highlights areas in which the unique needs of babies can be addressed more effectively. *Yearbook* data also provide a deeper look at key health outcomes that are directly influenced by the extent to which families have access to quality care, with prenatal care and birth outcomes being most significant.

For infants and toddlers, healthy development begins with the health of their future parents. The physical and social-emotional health and well-being of birthing people and infants are intrinsically interconnected and determine whether babies are born healthy with the potential to thrive. To promote a healthy pregnancy and positive birth outcomes, it is vital that expectant parents have early access to quality health care services that continues postpartum. Similarly, to ensure and sustain optimal development, infants and toddlers require access to the full continuum of preventive, primary, and social-emotional health care.

Access to health care services. The relationship between income and health in people overall is well established in the literature, and is documented in the higher incidence of poor health (e.g., chronic illness, disability, and shorter life expectancy) among individuals experiencing poverty and those with low income. *Yearbook* data on the demographics of infants, toddlers, and their families provide insight into the effects of income inequality and structural racism on access to care and health outcomes. The influence of income is most apparent in disparities in receipt of health care. In the context of pregnant people with low income this is reflected in the *Yearbook's* findings of lower receipt of timely prenatal care (6.4% nationwide), state-level disparities in maternal mortality, and poor birth outcomes. These inequities are driven by families' lacking the financial resources to afford insurance coverage as well as the barrier of living in an urban or rural "maternity care desert" where maternal health care hospitals and providers are limited or absent.

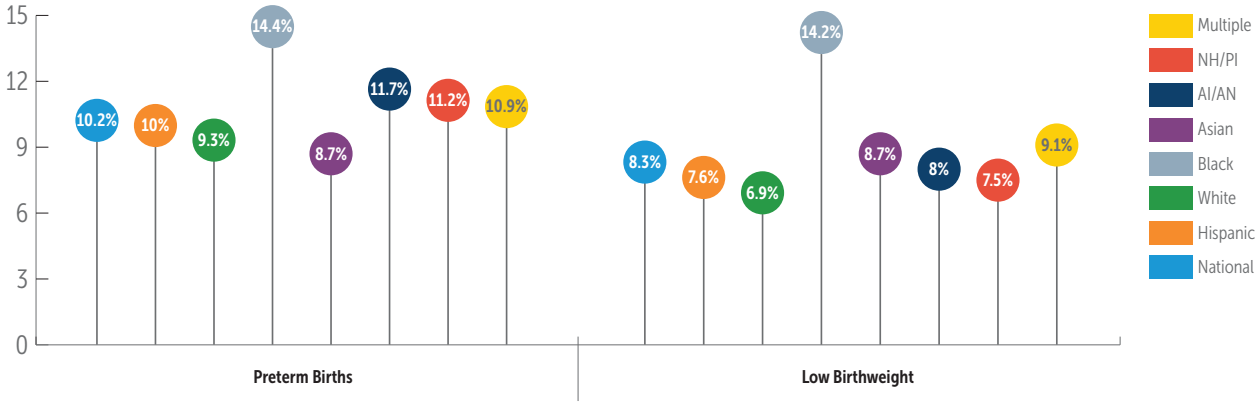
Preventive health care. Babies benefit most from care provided by a consistent medical provider or practice – a medical home – from which they receive coordinated, ongoing, comprehensive care. Yet nationally, slightly more than half (51.5%) had one. Significantly fewer babies in families with low income (41.6%) had medical homes than their peers in families above low income (58.4 percent). When examined by race/ethnicity, fewer Asian (41.8%), Hispanic (41.4%) and Black (41.0%) babies had a medical home than the national average. Lack of access to care contributes to lower rates of routine well-child visits. Although nationally a high percentage of babies (91%) had received regularly scheduled preventive medical care in the past 12 months, only 87.8% of babies in families with low income received a preventive medical visit in the previous year, compared to 93.4% of those in families above low income.

Access to behavioral health professionals. The relationship between parental mental health – particularly depression – and child well-being is well established in research[33] and the negative effects of maternal depression can begin prenatally.[34] Parents who are depressed are less likely to engage in the kinds of reciprocal social interplay that is so important to the healthy development of infants and toddlers.[35] The *Yearbook's* indicator of maternal mental health found that slightly more than one in five infants and toddlers (21.9%) had mothers who rated their own mental health as worse than "excellent" or "very good." The largest gap in this area was based on income. Babies in families with low income (26.9%) were more likely to have mothers who rated less than optimal mental health than those in families living above low income (18.8%). Fortunately, in response to the significant role mother's mental health plays in the well-being of babies, the Medicaid plans of 44 states require, recommend, or allow depression screening during well-child visits.

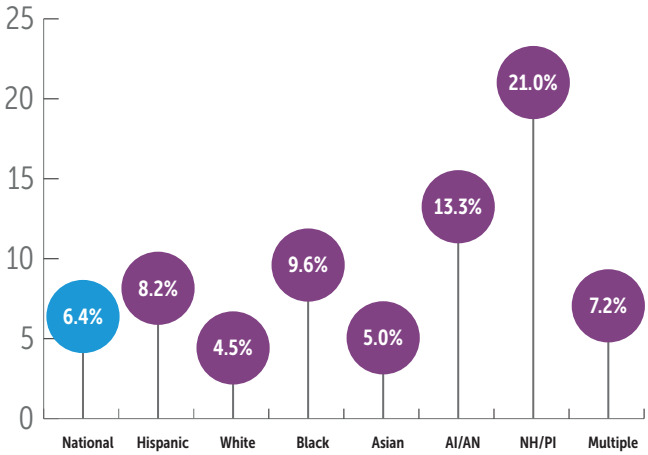
The impact of structural racism on health care access and quality of care. In this integral domain, disparities can jeopardize the development and long-term health of many babies. Yet deep racial and ethnic disparities persist on critical indicators of maternal and infant health and the pattern of disparities is apparent in most states. The root causes of these inequities lie in differences in access to quality care, implicit biases encountered in medical treatment, and the cumulative effects of racism-related stress that, as the data show, are often most prevalent among Black and American Indian/Alaska Native (AI/AN) women.[36] These experiences result in high rates of preterm births and babies born at low birthweight, and they contextualize babies' mortality outcomes.[37]

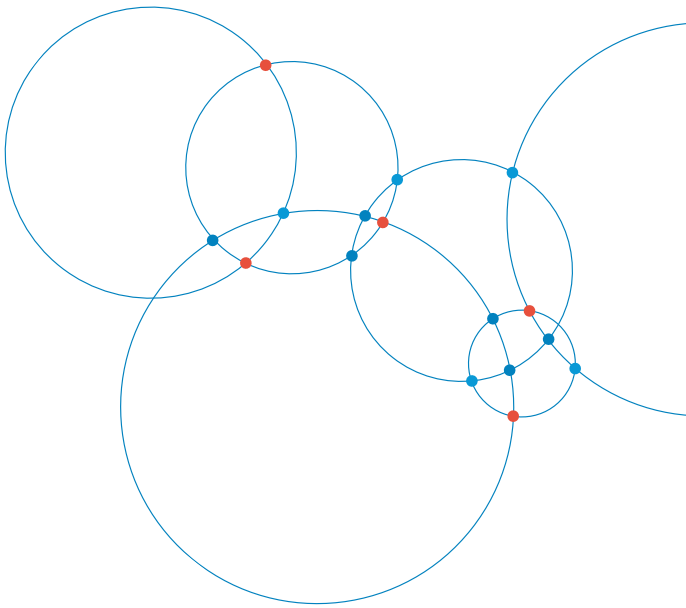
Most notably, *Yearbook* data reveal concerning patterns of delayed access to prenatal care in families of color, which makes it more likely babies will be born preterm or at low birth weights with less than optimal health that places them at developmental disadvantage. For example, while nationally the percentage of women receiving late or no prenatal care was 6.4%, the percentages of Native Hawaiian/Other Pacific Islander (NHOPI) (21.0%) and AI/AN (13.3%) pregnant women who received late or no prenatal care were strikingly high and more than twice the national average. Similar patterns (Figures 2 and 3) were found in the incidence of preterm births and babies born at low birthweight (i.e., less than 5.5 pounds), which is strongly associated with poor developmental outcomes that, beginning in infancy, can affect school readiness and extend into adult life.[38] As many as one in 12 infants (8.3%) in the U.S. were born at low birthweight. In comparison, low birthweight approached twice the national average among Black infants (14.2%), affecting one in seven Black babies.

NEGATIVE BIRTH OUTCOMES BY RACE AND ETHNICITY Figure 2.



LATE OR NO PRENATAL CARE Figure 3.





As policymakers seek to address access and quality drivers of health, the following questions are offered to guide insights into possible policy and programmatic responses:

1. *How well do we ensure all families with infants and toddlers have the insurance coverage they need to access quality health care?*
2. *How well do we ensure all pregnant people receive timely prenatal care and their babies receive recommended preventive health care and necessary health care services?*
3. *What changes to policies and practices are needed to improve access to and receipt of preventive and other essential health care and eliminate disparities in health?*

Table 1 provides a view of the *Yearbook's* national level findings on indicators for babies and families that are most relevant to SDOH goals for health care access and quality. In the section that follows this crosswalk, we demonstrate with a state example how policymakers and advocates can review and apply the data to effectively address their state's current and emerging health issues.

Table 1. Crosswalk Between SDOH Goals for Health Care Access and Quality and *Yearbook* Indicators

Healthy People 2030 goals for Health Care Access and Quality domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national average)
MATERNAL HEALTH		
Access to health care coverage • Increase the proportion of people with health insurance	Medicaid expansion state	39 states
	Eligibility limit (% FPL) for pregnant women in Medicaid	200
	CHIP Maternal Coverage for Unborn Child option	17 states
	Extension of Medicaid coverage for pregnant women postpartum	48 states – no law beyond mandatory 60 days; 3 states – law covering either (a) some women but not all, or (b) all women but for less than 1 year; 0 states – law covering all women for 1 year postpartum
Access to primary care • Increase the proportion of pregnant women who receive early and adequate prenatal care	Late or no prenatal care received	6.4%

Healthy People 2030 goals for Health Care Access and Quality domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national average)
CHILD HEALTH		
Access to health care coverage • Increase the proportion of people with health insurance	Uninsured low-income infants and toddlers	5.1%
Access to primary care • Increase the proportion of people with a usual primary care provider • Reduce the proportion of people who can't get medical care when it is needed • Reduce the proportion of people who can't get the dental care when it is needed	Medical home	51.5%
	Preventive medical care received	91.1%
	Preventive dental care received	34.5%
	Received recommended vaccines	72.7%
Access to health care services • Increase the ability of primary care and behavioral health professionals to provide more high-quality care to patients who need it	Mothers reporting less than optimal mental health	21.9%
	Medicaid plan covers maternal depression screening during well-child visits	44 states
	Medicaid plan covers social-emotional screening for young children	43 states
	Medicaid plan covers IECMH services – at home	49 states
	Medicaid plan covers IECMH services – in medical settings	46 states
	Medicaid plan covers IECMH services – in ECE settings	34 states

State Example Related to Health Care Access and Quality: South Carolina

South Carolina illustrates how data from the *Yearbook* can be applied to the SDOH framework to provide policymakers a deeper perspective of families with babies, their needs related to economic stability, and the extent to which states are responsive to their needs. Analysis of disparities on the aligned indicators in these states offers a more informative view of where differences were identified among babies and families beneath the averages.

Table 2 summarizes South Carolina's performance on *Yearbook* indicators related to Health Care Access and Quality. Visit the *State of Babies* website to access the *National Profile*, *State Profiles* and the *Compare Indicators* function for states' results and rankings on any indicator.

Table 2. *Yearbook* Indicators in Health Care Access and Quality in South Carolina

Indicators on which South Carolina is performing better than the national average	
Yearbook Indicator	Data/Rank
Medical home	O
Preventive dental care received	O
State Medicaid policy for maternal depression screening in well-child visits	Recommended
Medicaid plan covers social-emotional screening for young children	YES
Medicaid plan covers IECMH services – at home	YES
Medicaid plan covers IECMH services – in medical settings	YES
Medicaid plan covers IECMH services – in ECE settings	YES

Indicators on which South Carolina is performing worse than the national average	
Yearbook Indicator	Data/Rank
Medicaid expansion state	NO
Eligibility limit (% FPL) for pregnant women in Medicaid	R
CHIP Maternal Coverage for Unborn Child option	NO
Extension of Medicaid coverage for pregnant women postpartum	No law beyond mandatory 60 days
Late or no prenatal care received	R
Mothers reporting less than optimal mental health	R
Uninsured low-income infants and toddlers	R
Preventive medical care received	G
Received recommended vaccine	R

KEY TAKEAWAYS

Viewing South Carolina's *Yearbook* data with a SDOH lens reveals a limited set of indicators on which the state is doing relatively well and several on which there is room for improvement. This pattern of mixed performance is reflected in the state's lower ranking of **R (Reaching Forward)** for Good Health on the *Yearbook's* GROW scale. A closer look at the indicators on which South Carolina is doing worse than national averages provides additional options for advancing Health Care Access and Quality.

The *Yearbook's* findings related to SDOH goals indicate that while South Carolina has made efforts to connect pregnant people and babies to care, significant areas of challenge persist. Because Health Care Access and Quality are substantially influenced by income, it is important context that nearly half (48.4%) of the state's babies live in families with low income (25.5%) or who experience poverty (22.9%). This lack of income restricts their families' ability to afford and access health care, especially since the state has not adopted Medicaid expansion.

The intersectionality of income and race compounds the inequities for babies of color. Infants and toddlers of color in South Carolina comprise slightly less than half (47.5%) of the state's babies. However, due to past and current systemic discrimination and marginalization, an alarming 40% of Black and Hispanic babies experience poverty. The combined effects of inequities in access to care and the quality of care received are evident in marked disparities in birth outcomes within the state. Most disturbingly, *Yearbook* findings show that preterm births in South Carolina (11.5%) were moderately above the national average of 10.2%. However, the number of Black babies born preterm was 15.1%. Similarly, statewide, 9.8%% of babies were born with low birthweight. This overall percentage was driven by the 7.1% of Hispanic babies and 7.3% of White babies that were born at low birthweight, as 10.2% of AI/AN and Multiple Race babies, 10.4% of Asian babies, and 15.5% of Black babies were born at low birthweight.

KEY QUESTIONS TO GUIDE POLICY DECISION-MAKING

1. *How well do we ensure all families with infants and toddlers have the insurance coverage they need to access quality health care?*

Access to health care coverage.

- Uninsured infants and toddlers. Despite its high rate of babies experiencing poverty, at the time of the Yearbook, South Carolina had not adopted any of the policies tracked in the *Yearbook* that make health care coverage more available to families with low income. The state did not adopt Medicaid expansion under the Affordable Care Act and its eligibility limit for pregnant people (199% of Federal Poverty Level) is lower than the national average of 200%. Some states have limits set as high as 380%, which expands eligibility substantially. Because Medicaid and CHIP provide health care coverage for most babies in families with low income, a relatively low number of babies statewide (5.1%) were uninsured (equal to the national average). However, large racial and ethnic disparities were found. Most strikingly, Asian babies (19.0%) were nearly four times more likely than the state average to be uninsured; and 8.2% of Hispanic babies lacked insurance. The incidence of uninsured White babies (5.8%) was fractionally above the state average. Data for Black babies was not available to report. Higher percentages of infants and toddlers in rural areas (6%) were uninsured than those in urban areas (4.9%).
- Uninsured women of reproductive age. Continuous access to health care coverage is more challenging for parents and is of particular importance for women during and after pregnancy when complications can threaten their health. Although not a *Yearbook* indicator, as many as 15.8%% of women ages 19-44 in the state were uninsured.[39] Additional avenues for expanding women's access to coverage before and after birth that South Carolina can consider include offering coverage through CHIP's maternal health option and extending postpartum coverage beyond the required 60 days. By expanding insurance coverage, the state may also assist families with meeting other costs, including costs that may be related to healthy

pregnancies and births as well as parental mental health. States also must consider facilitating the ease of entry into programs and services, removing barriers and challenges to the enrollment process and streamlining access to comprehensive services when applicable. States and communities also can consider automatic cross-enrollment in programs and services when applicable.

2. *How well do we ensure all pregnant people receive timely prenatal care and their babies receive recommended preventive health care and necessary health care services?*

Receipt of primary care.

- Prenatal care. Statewide, 6.5% of pregnant women in South Carolina received late or no prenatal care (marginally exceeding the national average of 6.4%). However, examining prenatal care by race/ethnicity reveals that nearly twice as many Hispanic women (11.5%) received late or no care. Delayed care was also higher than the state average among Black (7.2%) and Multiple Race women (6.6%). In addition, 7.3% of rural pregnant women received late or no prenatal care, compared to 6.4% of urban.
- Preventive care for babies. *Yearbook* indicators for completion of preventive care for babies (i.e., well-child medical visits, dental visits, and vaccinations) showed mixed results and the data for medical and dental care could be analyzed by income only. South Carolina ranked in the lowest tier for medical care visits, with 88.6% of babies completing medical visits, compared to 91.1% nationally. Fewer babies in families with low income (84.3%) completed these visits in the prior 12 months than those in families above low income (92.3%). In contrast, at 36.5%, the state exceeded the national average of babies receiving dental care (34.5%) and babies in families with low income were more likely to have completed dental care visits (41.3%) than babies in families above low income (31.7%). The number of babies in South Carolina who had received recommend vaccinations was essentially the same as the national average (72.8 % and 72.7%, respectively). Disparities were present by race/ethnicity, with fewer Black (68.6%) and Hispanic (67.8%) up to date on vaccinations than the state average. However, completion of vaccinations was higher among babies in families with low income (75.2%) than in families above low income (70.4%).
- Receipt of behavioral health care. Similar to the national average (22.9%), one in five South Carolina mothers (21.7%) reported less than optimal mental health. Given this finding, it is encouraging to see that the state's Medicaid policies are supportive of mothers' and babies' social-emotional and mental health. These policies include coverage for social-emotional screening of infants and toddlers, maternal depression screening during well-child visits, and reimbursement for IECMH services delivered in all three settings where babies are most accessible.

3. *What changes to policies and practices are needed to improve access to and receipt of preventive and other essential health care and eliminate disparities in health?*

To achieve equitable health outcomes South Carolina's policymakers and communities might focus on the areas of findings where disparities were largest as well as the identified areas of continued need. As reported above, the largest gaps were found in receipt of timely prenatal care by race/ethnicity, and to a lesser extent by income. Disparities also existed by income and location. Recognizing the need to improve access to health care and health outcomes for babies, in 2010 South Carolina transformed the state's Medicaid program through the statewide continuous quality improvement initiative, Quality through Technology and Innovation in Pediatrics (QTIP).[40] The state did not, however, accept Medicaid expansion funds. QTIP placed

priority on applying best practices, eliminating duplication of services, and successfully linking babies to qualified providers through completed referral pathways. The state's goals for families with young children also focused on improving maternal and child well-being through a variety of state- and federally-funded initiatives (e.g., SC Birth Outcomes Initiative and SC Behavioral Health Quality Matrix). These initiatives may have resulted in a decrease in uninsured infants and toddlers in families with low income from 5.8% to 5.1% (equivalent to the national average at the time of the *Yearbook*) and more babies with a medical home than the national average.

Policies that Improve Health Care Access and Quality for Families with Infants and Toddlers

While expanded access to health coverage for parents remains a primary goal, several changes to Medicaid could improve access to insurance coverage and receipt of vital maternal and infant health care services.

Policy recommendations related to maternal (prenatal and postpartum) health care coverage access

- Expand insurance coverage for pregnant women by:
  - *Increasing the eligibility limit for pregnant women to 200% of FPL or higher;*
  - *Mandating Medicaid coverage for women through 12 months postpartum; and*
  - *Promoting coverage of approaches such as doulas.*

Policy recommendations related to child health

- Ensure infants and toddlers have access to preventive and other essential health care by:
  - *Mandating Medicaid coverage for all children until they are 3 years old: and*
  - *Requiring a certain percentage of Medicaid funding to be used for health promotion and prevention, including addressing the social determinants of health.*

Policy recommendations related to mental/behavioral health

- Ensure access to behavioral health services by:
  - *Requiring coverage of IECMH services that include multi-generational therapies for babies and caregivers.*

Policy recommendations related to early intervention

- Ensure infants and toddlers with developmental delays receive intervention services by:
  - *Promoting use of Early and Periodic Screening, Diagnostic, and Treatment (EPSDT) to monitor and address developmental needs.*

$ Economic Stability

The goal of the Economic Stability domain of SDOH is to "help people earn steady incomes that allow them to meet their health needs and in doing so to help individuals achieve economic stability."[41] For babies, economic instability – including but not limited to experiencing poverty and low income – can undermine development as well as long-term health, weakening foundations for all later learning. The presence of a baby can also affect family budgets through expenses related to child rearing. The *Yearbook*'s insights to the elements of the Economic Stability domain, including poverty and income, employment stability, and two basic needs, food security and housing stability, show that many babies experience conditions that can undermine development and long-term health outcomes.

The national overview shows that a large proportion of infants and toddlers (40.2%) live in families with low income or in poverty. Many live in families with difficulties in meeting basic needs such as housing and nutrition, but babies in families with low income are more likely to encounter these material hardships. The *Yearbook* disaggregated indicators provide insights to the confluence of experiences that combine to increase later health risks. Recent research shows that in particular the combination of poverty and living in crowded housing has a profound effect on young children's health and creates a greater risk of premature mortality.[42] The *Yearbook* also shows disturbing disparities among children and families of color, highlighting the urgent need for equitable policies. Furthermore, research conducted amid the pandemic found a growing number of parents of infants and toddlers had experienced a decrease in household income and reported material hardship.[43]

National and state policies must address the instability many infants and toddlers and their families experience in a manner that promotes equity in income, wealth accumulation, work supports, and meeting material needs. Table 3 includes key policies for the elements of the economic stability domain, but is not meant to be exhaustive. As the state example below illustrates, factors affecting economic stability can combine in different ways, requiring state policymakers to supplement broad policies with tailored solutions.

The elements of the Economic Stability domain include poverty and income, employment stability, and two basic needs: food security and housing stability. These elements are interrelated; inadequate income can contribute to inadequate housing. Lack of work supports can mean families may have to forego work – and income – because they cannot find or afford child care or lack paid family and medical leave. The *Yearbook* has 17 indicators aligned well with the elements of the Economic Stability domain and its goals (Table 3) that help discern the SDoH for babies.

Poverty and Income: Rapid brain development makes very young children uniquely in need of economic stability, and most vulnerable in its absence. Poverty literally gets under the skin, and affects neuro-physiological development. Almost one in five (18.6%) of infants and toddlers lived in families whose income was below 100% of the FPL.[c,44] Income disparities are stark: AI/AN (39.0%), Black (34.4%), Hispanic (25.3%), and multiple race (18.3%) babies were more likely to live in families experiencing poverty than other children. Families experiencing poverty often have little access to cash assistance that would help them subsist. Less than 20% of eligible families with infants and toddlers experiencing poverty received TANF cash benefits. National policies, most of which can also be adopted at the state level, should focus on increasing wages and reaching families with tax credits across the board to promote greater equity in family resources.

Employment Security: Juggling jobs and babies is hard work for families. Nationally, key supports are lacking to help them achieve this balance. The U.S. has no national paid family and medical leave or paid sick days policies, although 11 states and the District of Columbia have PFML and 14 have paid sick days. This void particularly impacts parents of color who are more likely to be in low wage jobs without employer-provided paid leave or the financial security to take unpaid leave.[45] Other workplace protections, such as addressing accommodations for pregnant workers, also are lacking. The biggest gap in work supports is in child care assistance. The cost of caring for infants and toddlers is particularly high, and *Yearbook* data show that child care accounts for a large portion of family budgets. The average

c For illustration, in 2022 100% of the FPL for a two-person household in the continental United States is $18,310, or $1,526 per month.

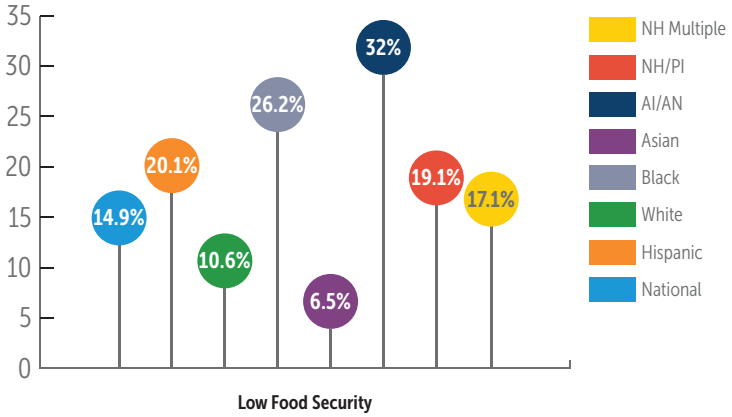
costs of center-based infant/toddler care range from 7.3% of the state median income (SMI) in Mississippi to 16.7% in California for two-parent families and 26.3% of SMI in South Dakota to 79.4% in the District of Columbia for single-parent families. Yet only 4.6% of families living with low or moderate income receive help paying for child care under the Child Care and Development Fund (CCDF). Policies should help families balance work and family to achieve greater economic stability.

Housing Stability: Housing takes one of the largest shares out of family income, particularly for those with low income. Half of renters with very low income spend more than half of their income on housing, an increase over the last several decades.[46] Most concerning, the *Yearbook* shows that a substantial proportion (15.4 percent) of infants and toddlers live in crowded housing, but 24.4 percent of those in families with low income are in this situation. It is important to note that this *Yearbook* indicator refers specifically to overcrowding out of necessity, rather than multiple generations of a family living together as a cultural choice and with adequate space (which can promote cultural well-being and safety). As noted above, the clusters of adverse experiences as well as the number are important. (See the Social and Community Context and Neighborhood and Built Environment domains for more in-depth discussion of housing and its effects on babies' health and development.) Policies increase the availability of housing assistance as well as building the housing supply.

Food Security: Food insecurity among families with babies is a national concern. As the state example below shows, it does not always track with overall poverty levels, indicating that other households with low and moderate income also can experience hunger. Nationally, 14.9% of households with babies experienced low or very low food security. However, marked disparities exist in the rates of food insecurity among AI/AN (32.0%), Black (26.2%), Hispanic (20.1%) and NHOPI (19.1%) babies (Figure 4). The immediate and long-term influences of these disparities for infants are particularly important because experiencing food insecurity can lead to poorer health[47], poorer performance on tests of cognitive development[48], and even mild food insecurity can contribute to developmental deficits.[49] Policy steps include increasing participation in food programs and creative solutions for rural areas and urban food deserts.

The impact of structural racism in undermining economic stability: Stark racial and ethnic inequities exist for several objectives in the Economic Stability domain. While low income and inadequate housing have clear impacts on health outcomes, for people of color they stem from more deep-seated systemic problems that effective policy solutions must account for. Income inequality grew out of a long history of racial discrimination, in large part built on the legacy of slavery, that pushed Black, Hispanic, and AI/AN people into jobs that were historically low-paying and intentionally lacked fair labor protections. Even with those protections, more segregated neighborhoods and workplaces limit helpful networking and job referrals to better paying jobs.[50] Reliance on salary history in hiring can perpetuate a wage gap that particularly affects women of color. Low-wage jobs often lack health and other benefits, influencing health outcomes by directly reducing access and indirectly increasing stress. Even assistance to alleviate poverty is tinged by racism: Allocation of TANF funds to cash assistance and monthly assistance payments are lowest in states with a long history of policy choices that limit access to Black families.[51,52]

FOOD INSECURITY BY RACE AND ETHNICITY Figure 4.



As policymakers seek to address the economic drivers of health, the following questions are offered to guide insights into possible policy and programmatic responses:

1. *How do we ensure all families have the ability to achieve economic stability?*
2. *How do we ensure families living in poverty have the ability to meet their basic needs (e.g., food, housing, health care, and education)?*
3. *How do we better understand systemic barriers and discriminatory practices that perpetuate cycles of poverty?*

Table 3. Crosswalk Between SDOH Goals for Economic Stability and *Yearbook* Indicators

Healthy People 2030 elements and goals for Economic Stability SDOH domain relevant for infants and toddlers	*Yearbook* indicators	National data
Poverty and income security • Reduce the proportion of people living in poverty	Infants and toddlers in poverty	18.6%
	TANF benefits receipt among families in poverty	18.5%
	TANF work exemption	24 states
	State (CTC	6 states
	State EITC	31 states
	Paid family leave	10 states
	Paid sick time that covers care for child	14 states
Employment security • Increase the proportion of children living with at least one parent who works full time	Infants and toddlers with no working parents	5.5%
	Accommodations for pregnant workers, protection from job loss	All employees covered (private and state) (5 states); State employees only (3 states); Limited coverage: State employees and private employees with exceptions (23 states); No protections (20 states)
Housing stability • Reduce the proportion of families that spend more than 30% of income on housing	Housing instability (3+ moves in the first three years of life)	2.9%
	Crowded housing	15.4%
Food security • Eliminate very low food security in children	Low or very low food security	14.9%
	Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) coverage	Range: 64.7% - 100% 46 states (including DC) at or above 80%

State Example Related to Economic Stability: Wyoming

Wyoming illustrates how data from the *Yearbook* can be applied to the SDOH framework to give policymakers a deeper perspective of families with babies, their needs related to economic stability, and the extent to which states are responsive to their needs. Analysis of disparities on the aligned indicators in these states offers a more informative view of where differences were identified among babies and families beneath the averages.

Table 4 provides a summary of Wyoming's performance on *Yearbook* indicators related to Economic Stability. Visit the *State of Babies website* to access the *National Profile*, *State Profiles*, and the *Compare Indicators* function for states' results and rankings on any indicator.

Table 4. *Yearbook* Indicators in the Economic Stability Domain for Wyoming

Indicators related to the economic stability of families with infants and toddlers on which Wyoming is performing better than the national average	
Yearbook indicator	Data/Rank
Infants and toddlers in poverty	11.5%
Percent Income-eligible infants and toddlers with EHS access	W
Low-/moderate-income infants and toddlers in CCDF-funded care	O
State allocated Child Care and Development Block Grant (CCDBG) funds toward infant and toddler care	YES

Indicators related to the economic stability of families with infants and toddler on which Wyoming still has room to grow	
Yearbook indicator	Data/Rank
Low or very low food security	G
Housing instability	G
TANF benefits receipt among families in poverty	G
Crowded housing	R
Paid family leave	NO
Paid sick time that covers care for child	NO
TANF work exemption	NO
State CTC	NO
State EITC	NO
Accommodations for pregnant workers, protection from job loss	No protections
Families above 200% of FPL eligible for child care subsidy	NO
WIC coverage	R
State reimburses center-based child care	NO

KEY TAKEAWAYS

Wyoming had an overall ranking of **G (Getting Started)** on the *Yearbook's* GROW scale. However, looking at the ranking of individual indicators within the subdomains included in Economic Stability domain shows the nuances of assessing how well babies and families are faring. Wyoming had much lower percentage of infants and toddlers in families experiencing poverty (11.5%) compared to the national average (18.6%). Yet other measures of economic stability, such as food insecurity and housing stability, show that many babies and families face material hardships. Moreover, policies that promote a work/family balance and job security are absent. These conditions contributed to the lower overall ranking and raise concerns over the impact of economic instability on child development.

KEY QUESTIONS TO GUIDE POLICY DECISION-MAKING

1. *How do we ensure all families have the ability to achieve economic stability?*

Economic Security: As noted above, Wyoming had a much lower percentage of infants and toddlers in families experiencing poverty (11.5%) compared to the national average (18.6%). Yearbook indicators suggest the state prioritizes supporting the ability of families with young children to work through assistance with child care, but provides fewer economic supports than found nationally. Specifically, Wyoming performed better than national averages on three indicators that support access to child care. Most notably, the state reached 17% of infants and toddlers experiencing poverty through the EHS program, exceeding the national reach by six percentage points. The priority the state places on making child care accessible to babies in families with low income or experiencing poverty also is evident in its allocation of CCDBG funds toward investments in infant and toddler care. Similarly, Wyoming served 5.5% of babies in families with low to moderate income CCDF-funded care, falling slightly above the national average of 4.6%. However, as described for Basic Needs below, the state does not extend eligibility for child care assistance to families with income above 200% FPL.

2. *How do we ensure families living in poverty have the ability to meet their basic needs such as food, housing, health care, and education?*

Basic Needs: The state's income profile suggests that many families could be prevented from receiving needs-based programs. For example, eligibility for child care assistance is set at lower than 200% of poverty, while 16 states set the eligibility to be above 200% FPL. In fact, Wyoming had 1.5 times more households with infants and toddlers experiencing low or very low food security (22.6%) compared to national average.

- *Food Security:* Food insecurity was worse in rural areas (24.2%)—which is where the vast majority of Wyoming's babies live – than in urban areas (18.3%*). At the state level, 96.3% of eligible infants participated in WIC, which was slightly lower than the national average.
- *Housing Stability:* More children in Wyoming were reported by their parents to have experienced housing instability (6.7%), with three or more moves before age 3, than the national average. Babies in families with low income were more likely to be reported by their parents to have experienced housing instability (12.3%) compared to those living in families above low income (3.8%). Additionally, more than one in ten babies (11.2%) were living in crowded housing, which will be discussed in the Social and Community Context domain, can negatively affect healthy development.

* Asterisked values indicate numbers are small; use caution interpreting.

Income: While Wyoming's poverty rate for babies was much lower than the national average, more families with infants and toddlers had low to moderate income. More than one in four infants and toddlers (26.8%) in Wyoming lived in families with low income compared with 21.7% of babies nationally. Moreover, almost nine out of ten (87.7%) infants and toddlers in Wyoming were in families living at or below 150% of SMI ($84,078 for a family of four) compared with 77.3% nationally. Wyoming does not have policies that would boost family income. For example, the state has no EITC or CTC to supplement federal tax credits. Additionally, the percentage of families with babies experiencing poverty who received TANF benefits was only 4.3 percent, a fourth of the national average of 18.5%.

Supportive Work Policies: One of the driving factors of Wyoming's lower overall ranking is its lack of policies that support families with children. Supportive policies include paid family leave (10 states have this policy), state CTC (6 states), state EITC (31 states), paid sick time that covers care for children (14 states), TANF work exemption (24 states), and state reimbursement of center-based child care (1 state). Wyoming did not have any of these supportive policies. Moreover, Wyoming did not have a policy that required employers to provide accommodations to pregnant workers and protections from job loss.

3. *How do we better understand systemic barriers and discriminatory practices that perpetuate cycles of poverty?*

Wyoming is one of few states with less than 25% babies of color. Hispanic (16.8%), AI/AN (4.6%), and Multiple Race babies (4.3%) comprise the largest populations of infants and toddlers of color. As a result, racial and ethnic disparities can be reported for very few *Yearbook* indicators in this domain and the proportion of babies in poverty by race cannot be reliably reported. It is noteworthy, however, that for the indicators of housing stability – instability and crowding – the percentages of Hispanic and AI/AN babies experiencing these conditions disproportionately exceeded the state averages. Where the data are available, Wyoming might examine any additional barriers encountered by their families due to marginalization or discriminatory practices. As indicated in the discussion above, the available data for the state suggest the overarching barrier for babies in the state is poverty – the impacts of which the state's policies have not yet addressed.

Policies to Promote Economic Stability for Families with Infants and Toddlers

Policies addressing economic security

➤ Reduce poverty and increase income by:

- *Increasing the minimum wage, with a strong national floor*
- *Enacting an enhanced, fully refundable CTC*
- *Increasing EITC*
- *Promoting hiring practices, such as prohibiting requesting salary history, that can disrupt perpetuation of low wages*
- *Decoupling health insurance coverage from employment*
- *Increasing TANF funds used for direct assistance*
- *Adopting approaches such as "Baby Bonds" to help close the wealth gap for people of color and increase the ability to purchase homes or pay for education*

Policies addressing employment

➤ Promote employment security by implementing:

- *National policy for paid family and medical leave and paid sick days*
- *Worker protection policies for pregnant and breastfeeding workers and workers with unpredictable work schedules*
- *Comprehensive, robustly funded child care program*
- *Support for people seeking to enter the workforce, such as job counseling and training*

Policies addressing housing

➤ Improve housing affordability and stability by:

- *Increasing availability of housing assistance, particularly through vouchers*
- *Increasing supply of public housing*
- *Creating a national emergency housing assistance fund to protect families with low income from eviction*

Policies addressing food and nutrition

➤ Increase food security by:

- *Increasing participation of eligible families in nutrition assistance programs such as Supplemental Nutrition Assistance Program (SNAP) and WIC*
- *Increasing the monthly allotments for proven nutrition supports such as SNAP and WIC benefits*
- *Creating innovative solutions to reach people in rural areas who are food insecure, such as mobile food pantries*
- *Investing in nutrition supports that meet families where they are such as the Child and Adult Care Food Program (CACFP), school meals, and summer feeding programs*

Education Access and Quality

The goal of the SDOH Education Access and Quality domain is to increase educational opportunities and help children and adolescents do well in school. For infants and toddlers, this domain relates to the informal and formal opportunities for early learning that occur at home and in early care and education settings that prepare them for lifelong learning. *Yearbook* data point to challenges in both settings. SDOH objectives in this domain align with 14 *Yearbook* indicators that are applicable to babies. These objectives include increasing the proportions of children who participate in high-quality early childhood education programs, who are developmentally ready for school, and who receive early intervention services by age 4 years.

High-quality early childhood programs advance children's early learning, promoting their cognitive, language, and social-emotional development, and preparing them for school achievement. In combination with parents, early childhood programs build the foundation young children need to thrive as adults. Comprehensive early childhood education, beginning at birth, is also a powerful and cost-effective way to mitigate the negative consequences that poverty has on child development and opportunity in adulthood.[53] It is of particular benefit to children in families with low income, promoting positive child development outcomes to a greater extent than for babies in families with higher income.[54] Importantly, economic analysis shows that high-quality care from birth to 5 years old yields a return on investment of 13% per annum in the form of better outcomes in education, earnings, and health.[55] Despite these benefits, inadequate funding of early learning programs and the high cost of infant and toddler care leaves many families, especially those with low income, with few or no options for high-quality care.

For the purposes of the *Yearbook,* the EHS program provides benchmarks of quality that may be a model for states. Table 5 presents data at the time of the *Yearbook* on the number of states with early childhood program requirements that met or exceeded EHS' performance standards for adult-child ratios[d] and group size[e], both factors that optimize the amount of individualized attention and interaction babies receive from their care providers. Education requirements[f] that ensure lead teachers have the foundational knowledge to provide infants and toddlers with enriching cognitive, developmental, and social-emotional experiences are also summarized.

d The EHS performance standard for adult/child ratio is one adult for every four infants and toddlers.

e The EHS performance standard for group size is no more than eight infants or toddlers in a group.

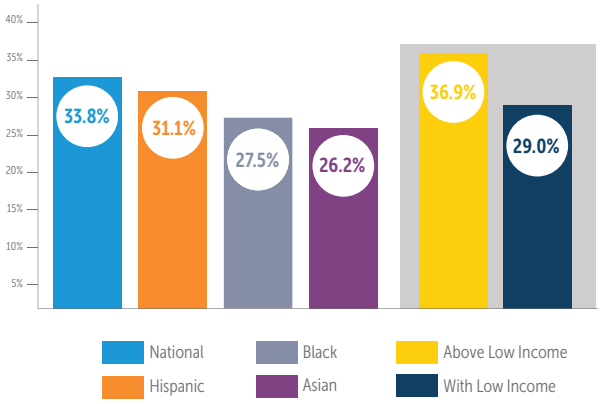
f The EHS education requirement for a lead teacher is a child development associate (CDA) credential or state equivalent.

Access to high-quality early childhood education. Families' access to quality early care and learning programs is limited by underinvestment in the child care system.[56] Unlike K-12 education, which is largely funded through public tax dollars, the U.S. places most of the burden for paying for child care on parents of young children, offsetting true costs through the low wages of the early educators who provide care. As a result, even families with moderate incomes struggle to find and afford child care for infants, which exceeds the cost of 4-year public college in 30 states and the District of Columbia.[57] Exceedingly high costs and low-quality floors, combined with insufficient public investment, place access to quality care that supports foundational development out of reach for many infants and toddlers. As discussed in the Economic Stability domain, families with young children, particularly those with modest incomes, could benefit from the additional assistance of child care subsidies that offset the high costs of care.

Developmental readiness for school, language, and literacy. Language development is fundamental to many areas of learning and helps set the stage for later school success. Long before they are able to read, infants and toddlers develop literacy skills and an awareness of language.[58] These skills begin developing at birth and are fostered by parents and caregivers. By reading aloud to their young children, parents help them acquire the skills they will need to be ready for school.[59] Yet *Yearbook* data on indicators of reading at home show that nationally only 36.9% of babies were read to daily, with notable differences by race/ethnicity and income. Asian (35%), Black (24%), and Hispanic (23%) parents who reported reading to their baby daily was lower than the national average. And parents in households with low income were significantly less likely to read to their infants and toddlers every day (26.9%) than those in households above low income (43.7%). Parents were more likely to sing and tell stories their babies daily than read daily – 57.3 % reported doing so. However, similar patterns of differences were found among households by race/ethnicity and income.

Receipt of early intervention services. Despite the rapid development babies experience in their first 3 three years, *Yearbook* data make clear there is room for improvement in identifying and addressing developmental delays and disabilities among infants and toddlers. Nationally, only one in three babies (33.8%) aged 9–35 months old received a developmental screening, and screening of Hispanic (31.1%), Black (27.5%), and Asian (26.2%) babies was lower than the average (Figure 5). Differences in screening were also evident by income, with babies in families above low income (36.9%) screened at a higher rate than babies in families with low income (29%). Although disaggregated data were not available for receipt of Individuals with Disabilities Education Act (IDEA) Part C services, as few as 7.3% of infants and toddlers with disabilities from birth to 2 years old had received early intervention services within the most recent 12 month period. Equally concerning, only six states include children at risk for disabilities as eligible for IDEA Part C services or report that they serve them, increasing the number of babies who are likely to be missed. State-level data on the timeliness of providing services to babies with disabilities was more promising. In 35 states, 95% or more of eligible infants and toddlers required to have an initial Individual Family Service Plan (IFSP) meeting had the meeting within 45 days.

KEY FINDINGS DEVELOPMENTAL SCREENING Figure 5.



As policymakers seek to improve early education access and quality, the following questions can help guide policy and programmatic responses:

1. *How well do we ensure all infants and toddlers have access to high-quality early learning experiences?*
2. *How well do we ensure all infants and toddlers are developmentally ready for school?*
3. *How does access to quality early education opportunities vary by race/ethnicity and income? And what changes to policies and practices are needed to improve disparities?*

Table 5 provides a view of the *Yearbook's* national level findings on indicators for babies and families that are most relevant to SDOH goals for Education Access and Quality. In the section that follows this crosswalk, we demonstrate with a state example how policymakers and advocates can review and apply the data to effectively address their state's current and emerging early education issues.

Table 5. Crosswalk Between SDOH Goals for Education Access and Quality and *Yearbook* Indicators

Healthy People 2030 goals for Education Access and Quality domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national average)
Access to high-quality early childhood education • Increase the proportion of children who participate in high-quality early childhood education programs	Income-eligible infants and toddlers with EHS access	11%
	Low-/moderate-income (< 150% of FPL) infants and toddlers in CCDF-funded care	4.6%
	Families above 200% of FPL eligible for child care subsidy	16 states
	Group size requirements meet or exceed EHS standards	23 states[g] (16 states for one age group, six states for two age groups, one state for three age groups)
	Adult/child ratio requirements meet or exceed EHS standards	35 states[h] (21 states for one age group, 12 states for two age groups, two states for three age groups)
	Teacher qualifications	6 states – Child Development Associate (CDA)/state equivalent (45 states – no credential beyond high school)
	Infant/toddler professional credential	30 states
	State allocated new CCDBG funds to invest in infant/ toddler care	34 states

g 23 states meet or exceed the requirement for one of the ages (infants), 6 states achieve it for two ages (infants and toddlers), and only 1 state achieves it for all three ages.

h 21 states meet or exceed the standard for one of the ages (infants), 12 states achieve it for two ages (infants and one-year-olds), and 2 states achieve it for all three ages, including 2-year-olds

Healthy People 2030 goals for Education Access and Quality domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national average)
School readiness/Early literacy • Increase the proportion of children who are developmentally ready for school	Parent reads to baby every day	36.8%
	Parent sings to baby every day	57.3%
Early intervention • Increase the proportion of children with developmental delays who get intervention services by age 4 years	Developmental screening received	33.8%
	At-risk children included in IDEA Part C eligibility definition	6 states
	Percentage of infants and toddlers IDEA Part C services	7.2%
	Timeliness of Part C services	Range: 79.2 – 100% 36 states = 95% or above

State Example Related to Education Access and Quality: New Jersey

New Jersey illustrates how applying the SDOH framework to *Yearbook* data can provide policymakers and advocates with a deeper understanding of the current status of families with babies in their state, their areas of need, and the extent to which their state is responsive to their needs. Analysis of disparities on selected indicators in this example offers an additional critical equity lens on the unique experience of babies in communities marginalized by structural inequities. These disparities are revealed by looking beneath the averages.

Table 6 summarizes the state's performance on *Yearbook* indicators related to Education Access and Quality. Visit the *State of Babies website* to access the *National Profile*, view *State Profiles* and the *Compare Indicators* function for all states' results and rankings on any indicator.

Table 6. *Yearbook* Indicators in Education Access and Quality in New Jersey

Indicators on which New Jersey is performing better than the national average	
Yearbook Indicator	Data/Rank
Income-eligible infants and toddlers with EHS access	W
Low-/moderate-income (< 150% of FPL) infants and toddlers in CCDF-funded Care	W
State allocated new CCDBG funds to invest in infant/toddler care	YES
Adult/child ratio requirements meet or exceed EHS standards	For 1 of 3 age groups (infants)
Group size requirements meet or exceed EHS standards	For 2 of 3 age groups (infants and one-year-olds)
Infant/toddler professional credential	YES (Not Ranked)
Parent reads to baby every day	W
Parent sings to baby every day	W
Developmental screening received	O
Percentage of infants and toddlers receiving IDEA Part C services	W
Timeliness of Part C services	99.7% (Not Ranked)

Indicators on which New Jersey is performing worse than the national average	
Yearbook Indicator	Data/Rank
Families above 200% of FPL eligible for child care subsidy	NO
Teacher qualifications	No requirement beyond high school
At-risk children included in IDEA Part C eligibility definition	NO (Not Ranked)

KEY TAKEAWAYS

Review of New Jersey's *Yearbook* data with a SDOH lens reveals the state is performing well on nearly all indicators that support Education Access and Quality. This is reflected in the state ranking in the highest tier for education, **W (Working Effectively)** on the *Yearbook's* GROW scale. Room for improvement is suggested in three policy indicators that would expand affordability of care, set higher standards for the qualifications of lead teachers in early childhood programs, and expand eligibility of infants and toddlers for Part C services. A closer look at the indicators on which the state is doing worse than national averages provides options for additional advances in Education Access and Quality. Additionally, it is important context in reviewing the findings for New Jersey to note the state's babies show higher diversity than nationally (57.3% are babies of color, compared to 51.7% nationwide). Although statewide fewer babies live in families with low income or in poverty than the national average (29.8% and 40.3%, respectively), the number of Hispanic babies (26.0%) in families with low income and Black (32.5%) and Hispanic (20.1%) babies experiencing poverty exceed the national average. Their parents face the greatest challenges in being able to access quality care.

Overall, the *Yearbook's* findings related to SDOH goals for education of young children in New Jersey are promising and indicate the state has placed a priority on improving the access families with babies have to quality early learning programs, screening babies for developmental delays, and connecting babies with disabilities to early intervention services.

KEY QUESTIONS TO GUIDE POLICY DECISION-MAKING

1. *How well do we ensure all infants and toddlers have access to high-quality early learning experiences?*

Access to high-quality early childhood education. Given the high cost of infant and toddler care and disproportionately high number of Black and Hispanic babies experiencing poverty in New Jersey, EHS HS HEHS is an important comprehensive source of cost-free, high-quality early childhood and family supportive services. The state was able to serve 14% of income-eligible babies, exceeding the national reach of EHS by three percentage points. However, the low reach of the program at both state and national levels is constrained by inadequate funding. More robust funding for EHS would enable the state to serve far more families. Additionally, New Jersey is one of 34 states that allocated CCDBG relief funds toward investments in infant/toddler care. As many as 76.4 % of the state's babies live in families with low or moderate income (at or below 150% of the state median income of $68,010 for a family of four) who could benefit from receiving a CCDF child care subsidy. Statewide, this proportion is fractionally lower than 77.3% of families nationally. However, a striking 91% of Black (90.8) and Hispanic (91.0) babies are in families with income at this level. *Yearbook* data indicate that 6.0% of these babies participated in CCDF-funded care. While this exceeds the national percentage of babies reached (4.6%), various barriers (e.g., waiting lists or frozen intake, high family copayments, and low reimbursement rates for care providers)[60] may be restricting access to subsidized care in the state.

Quality of care. The clearest area in which New Jersey outperforms most other states is in setting quality standards for early childhood programs. Specifically, the state met or exceeded EHS performance standards in its requirements for adult/child ratios for infants (requiring no more than four infants for each adult) and for group size (requiring no more than eight infants and one-year-olds in a group). As previously discussed, both measures optimize the amount of individualized attention babies receive to foster their learning, development, and care needs. New Jersey has also implemented an infant and toddler professional credential, which advances quality of care by recognizing providers' achievement of the specialized knowledge and skills required to provide high-quality care for babies. The state's achievements in advancing the quality of early childhood education can be further advanced by adopting lead teacher qualification requirements beyond high a school diploma. This might include implementing a CDA credential or state-equivalent, similar to EHS standards.

2. *How well do we ensure all infants and toddlers are developmentally ready for school?*

Developmental readiness for school. The *Yearbook's* indicators of exposure to early language development and literacy skills – parents reading and singing to babies daily – are additional areas where New Jersey ranks in the highest two tiers. Overall, slightly more than two in five parents (43.2%) in the state reported reading to their baby daily, compared to the national average of 36.8%. However, rates of reading were below the state average among Asian (28.8%*) and Hispanic (37.0%) families. Data for Black families were not available. Income level also played a role in whether babies were read to every day. In contrast to the national pattern, babies in families with low income (47.6%*) were more likely to be read to than those in families above low income (41.5%). While this finding may be influenced to some extent by the sample size of parents with low income, it may also reflect the impact of New Jersey's early literacy initiatives, such as "Reach Out and Read"[61] that provides free books and information on the importance of reading aloud to infants, toddlers, and preschoolers at home to families with low income through more than 100 health clinics. The rates of parents who reported singing to their babies daily (63.9%) exceeded the national average of 57.3%. However, like reading, rates were lower among Asian (46.5%) and Hispanic (44.8%) parents. Rates of daily singing to babies were lower for babies in families with low income (58.5%) than in families above low income (65.9%).

3. *How well do we ensure all babies receive developmental screenings and are connected to early intervention services for identified disabilities?*

Early intervention services. New Jersey is among the top 10 states in the nation for providing Part C services to infants and toddlers with disabilities, with 10.2 % of babies receiving these services statewide, compared to 7.2 % nationally. However, New Jersey did not include children at risk for disabilities as eligible for IDEA Part C services or report that they served them, which would extend the reach of the state's early intervention services. It is noteworthy, however, that the percentage of babies for whom developmental screening was completed (34.6%) was only slightly above the national average of 33.8%. This value was driven by the significantly higher percentage of screenings completed among Hispanic babies (46.6%). In contrast, screening was lower than the national average among Asian (19.9%) and White (33.0%) babies. Minimal difference was found between babies in families with low income (35.0%) and those in families above low income (34.4%).

Policies and Programs that Support Education Access and Quality for Families with Infants and Toddlers

Policy recommendations related to access to quality early childhood education

- Ensure all families access to quality early childhood programs by:
  - *Fully funding EHS as an effective model for early development and family support so that it can reach all eligible infants and toddlers as well as pregnant people;*
  - *Stabilizing and sustaining the child care system and workforce now, while building a system that recognizes child care as the public good it is, funded to ensure all families have access to high-quality affordable child care that meets their children's developmental needs, while ensuring early educators are supported and compensated in line with the critical importance of the work they do;*
  - *Intentionally investing high-quality care in communities where families with infants and toddlers have the least access to it; and*
  - *Recognizing and supporting the range of family preferences in types of care and increasing the availability of mechanisms, (e.g., staffed family child care networks, shared services models, resource and referral agencies, Infant-Toddler Specialist networks) that can support and stabilize all provider types.*

Policy recommendations related to school readiness/language and literacy

- Support families in providing enriching early learning and literacy activities at home by:
  - *Providing parents information and resources to engage in early learning activities at home; and*
  - *Increasing public awareness of the benefits babies derive from hearing language and engaging in close contact reading activities.*

Policy recommendations related to early intervention

- Expand early intervention as an essential part of the early care and learning system by
  - *Increasing federal funding of Part C IDEA from 1990's levels to enable states to fully meet the developmental needs of infants (e.g., helping families navigate the system, expanding the early intervention workforce, ensuring adequate reimbursement);*
  - *Ensuring coverage for more children who are at risk or could benefit from services; and*
  - *Incorporating more IECMH expertise and services into early intervention.*

Social and Community Context

The goal of the SDOH Social and Community Context domain is to increase the social and community supports available to children and their parents that contribute to positive health outcomes. A variety of factors are addressed in this domain. Those most relevant to families with young children include those that contribute to cohesion in families and communities (e.g., communication between parents and children) and contexts that negatively affect supports available to families and communities (e.g., unsafe neighborhoods, discrimination) – all of which influence health.

For infants and toddlers, positive relationships and interactions with parents, caregivers, and others in their community are central not only to good physical health, but to establishing the bedrock for healthy cognitive and social-emotional development. Nurturing relationships and interactions during these years stimulate and strengthen their brain development and lay the foundation for healthy development over the course of their lifespan.[62] When babies receive what their growing brains need to thrive in social and community context, they can form healthy attachments, develop trust, and achieve positive social-emotional development that gives them the capacity to form strong relationships in the future.[63] Without this early foundation, infants and toddlers are more likely to experience developmental, educational, and social challenges in addition to poorer health outcomes.

Reviewing Healthy People 2030 goals in the Social and Community Context domain, 10 *Yearbook* indicators align well with the objectives of this domain (Table 7). SDOH objectives that are most relevant for families with infants and toddlers include increasing the proportions of children and adolescents who communicate positively with their parents and children and adolescents who show resilience to challenges and stress. These objectives are addressed in *Yearbook* indicators of family resilience, adverse childhood experiences, community/neighborhood safety, and maternal and infant and early childhood mental health. An additional objective within this SDOH domain, increasing the proportion of children whose families read to them at least four days per week is addressed in the Education Access and Quality section of this report.

Family resilience. Resilience when faced with adversities and challenges is a strength that benefits families and babies and is a particularly important protective factor for babies in marginalized families. Children who learn that families can solve problems together, participate in decision-making, and reduce conflict gain valuable skills related to planning, communicating, managing emotions, and optimism that can improve their chances of being resilient when encountering their own challenges.[64] Nationally, 84.9% of babies lived in families that reported resilience. However, differences by race/ethnicity and income show that Hispanic (81.5%), Asian (80.3%), and Black (78.0%) babies whose parents reported "family resilience" was lower than the average. And fewer families with low income (79.9%) reported resiliency than those above low income (88.3%) (Figure 6).

Maternal and Infant Early Childhood Mental Health. Like physical health, the social-emotional health of parents and babies are interconnected. Babies' social-emotional skills carry, for example, into the period after age 3 when children begin looking outwardly from their relationship with their parents to peers for social interactions. Strong relationships between parents and their babies form the basis for positive communication

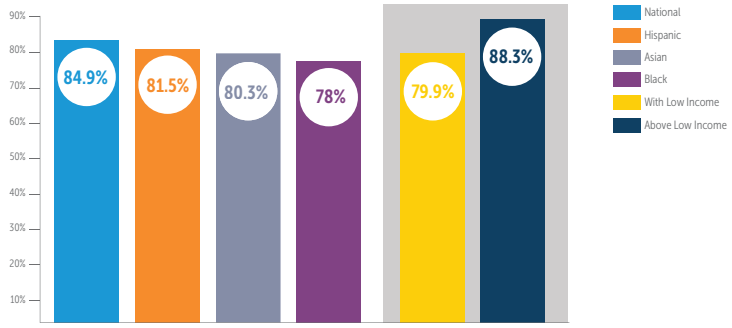
and are affected by parents' ability to be present both physically and emotionally. The relationship between parental mental health – particularly depression – and child well-being is well established in research.[65] As noted in the Health Care Access and Quality domain, parents who are depressed are less likely to engage in the kinds of reciprocal social interplay that is so important to the healthy development of infants and toddlers.[66]

The *Yearbook's* indicator of maternal mental health challenges, "Mothers reporting less than optimal mental health," indicates that more than one in five infants and toddlers (21.9%) had mothers who rated their own mental health as worse than "excellent" or "very good." When examined by race/ethnicity, the percentage of White children with mothers (22.8%) reporting less than optimal mental health was above the national average. Wider variation was found by income. Infants and toddlers in families with low income (26.9%) were more likely to have mothers who rated their mental health as worse than "excellent" or "very good" than those in families living above low income (18.8%). In response to the significant role mother's mental health plays in the well-being of babies, the Medicaid plans of 44 states require, recommend, or allow maternal depression screening during well-child visits.

Adverse Childhood Experiences. The CDC defines ACEs as "potentially traumatic events that occur in childhood," including the experience or witnessing of violence and exposure to traumatic family events, which may include intimate partner violence, divorce, substance use disorder, or incarceration of a parent. Nationally, *Yearbook* data indicate that one in five babies (19.6%) have already had one adverse experience and 7.3% of babies have experienced two or more ACEs. Black children (11.8% experience two or more ACEs) and children with low income (12.7% experience two or more ACEs) experience ACEs in greater proportions than other groups. In contrast, 0.8% of Asian children, and 3.6% of families above low income experience two or more ACEs. Higher proportions of children experience one adverse experience – for example, 26.1% of Black children and 15.6% of Asian children experience one adverse experience. Similarly, 28.7% of families with low income and 13.3% of families who are above low income experience one adverse experience.

Neighborhood safety. Children can be exposed to violence in the home and the community. In addition to examining domestic or intimate partner violence, it important to address community safety. A safe neighborhood environment, free

KEY FINDINGS FAMILY RESILIENCE Figure 6.



of potential affronts to parents' and children's physical and emotional security is one of several basic needs that contribute to child and family well-being and provide developmental benefits for infants and toddlers. Unsafe neighborhoods (i.e., areas with high crime rates and where future crime is likely[67]) are a significant source of stress and are associated with high rates of infant mortality, low birthweight, child abuse and neglect, and poor motor and social development among young children.[68] Parents in these neighborhoods may restrict children's opportunities for outdoor play out of concern for safety.[69] *Yearbook* data indicate that nationally a relatively low percentage of parents with babies reported living in unsafe neighborhoods (5.2%). However, disparities were evident by race/ethnicity and income. Specifically, Black (7.7%), Hispanic (7.2%), and Asian (5.6%) parents of infants and toddlers were more likely to report living in unsafe neighborhoods than the national average; and parents with low income (7.6%) were twice as likely to live in unsafe neighborhoods than those above low income (3.6%).

The Impact of Structural Racism on Social and Community Context

Just as babies are dependent on the health and well-being of their parents, families are deeply influenced by the broader communities in which they live. A sense of belonging and support of community is important for all families with young children and holds unique significance for babies and families in marginalized communities. Structural racism and discriminatory practices that limited communities' access to economic resources and supports continue to drive disparities in young children's health and well-being. As indicated in the discussion above, disproportionate exposure to stressors in communities of color, particularly those with concentrations of families with low income or experiencing poverty, continue to negatively affect the social and emotional well-being of babies and their families.

As readers examine the national data and state example presented in this section, the following questions are offered to guide insights into possible policy and programmatic responses:

1. *How well do we ensure all babies have positive communications with their parents?*
2. *How well do we ensure all babies develop resilience to challenges and stress?*
3. *How well do we ensure all families are comfortable in and feel safe, secure, and supported in their communities?*

Table 7. Crosswalk Between SDOH Goals for Social and Community Context and *Yearbook* Indicators

Healthy People 2030 goals for Social and Community Context SDOH domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national average)
Increase the proportion of children and adolescents who show resilience to challenges and stress • Family Resilience • Adverse Childhood Experiences • Neighborhood Safety	Family resilience	84.2%
	Babies with two or more ACEs	7.3%
	Babies living in unsafe neighborhoods	5.2%
Increase the proportion of children and adolescents who communicate positively with their parents • Maternal and Infant & Early Childhood Mental Health	Mothers reporting less than optimal mental health	21.9%
	State Medicaid policy for maternal depression screening in well-child visits	Required (8 states); Recommended (27 states); Allowed (9 states); No policy (7 states)
	Medicaid plan covers social-emotional screening for young children	44 states
	Medicaid plan covers IECMH services at home	49 states
	Medicaid plan covers IECMH services at pediatric/family medicine practices	46 states
	Medicaid plan covers IECMH services at early childhood education programs	34 states
	Potential home visiting beneficiaries served	2.10%

State example related to Social and Community Context: Maryland

Maryland illustrates how data from the *Yearbook* can be applied to the SDOH framework to provide policymakers a deeper perspective of families with babies, their economic stability, and the extent to which states are responsive to those needs. Analysis of disparities on the aligned indicators in these states offers a more informative view of where differences were determined among babies and families beneath the averages.

Table 8 provides a summary of Maryland's performance on *Yearbook* indicators related to Social and Community Context. Visit the *State of Babies* website to access the *National Profile*, *State Profiles* and the *Compare Indicators* function for all states' results and rankings on any indicator.

Table 8. *Yearbook* Indicators in Social and Community Context Domain for Maryland

Indicators related to the social and community of families with infants and toddler in which Maryland is performing better than the national average	
Yearbook Indicator	Data/Rank
Mothers reporting less than optimal mental health	O
State Medicaid policy for maternal depression screening in well-child visits	Required
Medicaid plan covers social-emotional screening for young children	YES
Medicaid plan covers IECMH services at pediatric/family medicine practices	YES
Medicaid plan covers IECMH services at early childhood education programs	YES
Medicaid plan covers IECMH services at home	YES
Two or more ACEs	W
Unsafe neighborhoods	O

Indicators related to the social and community of families with infants and toddler in which Maryland still has room to grow	
Yearbook Indicator	Data/Rank
Family resilience	R
Potential home visiting beneficiaries served	G

KEY TAKEAWAYS

Maryland had an overall ranking of **W (Working Effectively)** on the *Yearbook's* GROW scale. The state's babies were highly diverse, with infants and toddlers of color being 61.4% of the baby population. Overall, the Social and Community Context for Maryland's babies appears encouraging, although concerns arise in examining experiences by race/ethnicity and income.

The income level of families in Maryland is an important context for reviewing the state's data in this domain. Although the percentage of babies in families living with low income (19.8%) was similar to the national average, Maryland had substantially fewer babies living in families experiencing poverty (11.3%, compared with 18.6% nationally). In fact, Maryland was among the top five states with the least number of babies in families experiencing poverty. However, when viewed by race/ethnicity, poverty rates were above the state average for Asian (16.3%*), Black (16.3%), Hispanic (16.7%), and multiple race (15.8%) babies. Strikingly, the rate of poverty among White babies (4%) was three times lower than the state average. As noted below, families with low income reported far less resilience, and mothers living with low income were much more likely to report less than optimal mental health.

KEY QUESTIONS TO GUIDE POLICY DECISION-MAKING

1. *How well do we ensure all babies have positive communications with their parents?*

Maternal Mental Health. Maryland's Medicaid plan supports maternal mental health by requiring maternal depression screening during well-child visits. Maryland is among just eight states who have implemented this highest level of support. Lower levels of support include recommending or allowing these important screenings. However, the percentage of infants and toddlers with mothers reporting less than optimal mental health was slightly above the national average (22.6%, compared with 21.9%). Notable disparities existed by both race and income, with the most pronounced difference found by income level. Reports of less than optimal mental health among mothers of babies in families with low income (34.6%*) were nearly two times higher than among mothers living above low income (18.2%). The incidence of Black infants and toddlers with mothers reporting poor mental health (33.8%) was 50% higher than the state average. As noted in the description of this domain, this may reflect the additional stressors that come with being more likely to live in communities with low income or experiencing poverty, in unsafe neighborhoods as well as individual and community-level experiences of discrimination and racism.

2. *How well do we ensure all babies develop resilience to challenges and stress?*

Family Resilience. Maryland's weakest indicators are related to family resilience and the reach of home visiting services that support parents in promoting their babies' optimal development and well-being. Specifically, Maryland fell in the lowest tier of states for family resilience and second to lowest tier for home visiting beneficiaries served. Although on average, 84.9% of the state's babies were in families that reported resilience, the rate was lower than the state average among Black (76.3%) and Hispanic (80.4%) families. Additionally, nearly 16 percentage points fewer families with low income (73.4%*) reported resilience than families above low income (89.2%). The final area of concern in this domain was the lower number of potential home visiting beneficiaries served (0.9%) compared with the national average of 2.1%. Expanding access to home visiting services could broaden the network of support available to parents with young children and contribute to an improved sense of resilience.

Adverse Childhood Experiences. Notably, Maryland had the lowest incidence of babies with two or more ACEs in the nation, and differences by race/ethnicity were within one percentage point of the state average for Black (2.2%), Hispanic (0.7%), and White (0.0%*) babies.

Maternal and IECMH Services. Given the state findings for resilience and disparities in maternal mental health, it is promising to see that Maryland has implemented policies that support families' access to IECMH services. The state's Medicaid plan covers social-emotional screening of young children, as well as delivery of IECMH services at home, at pediatric/family medicine practices, and in early childhood education settings.

3. *How well do we ensure all families are comfortable in and feel safe, secure, and supported in their communities?*

Neighborhood Safety: Maryland had substantially lower rates of babies whose parents reported living in unsafe neighborhoods than seen nationally (2.8%, compared with 5.4% nationally). The state ranked in the second highest tier on this indicator related to basic needs. This is likely a function of the lower number of babies in families with low income or experiencing poverty in comparison to other states. However, Hispanic parents in Maryland with babies (5.8%) were more likely than both the state and national averages to report living in unsafe neighborhoods.

Policies and Programs that Support the Social and Community Context of Families with Infants and Toddlers

Policy recommendations related to maternal mental health and IECMH

- Build the infrastructure and means to promote and address the foundational mental health needs of parents and babies by
  - *Infusing all early childhood settings, such as pediatric care, child care, and home visiting, with an understanding of IECMH to promote positive social-emotional development and seek support from IECMH professionals to address behavioral health concerns;*
  - *Consistently applying the science of IECMH with the widespread use of developmentally appropriate practices and tools and promoting the use of developmentally appropriate assessment instruments and the Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (DC:0-5)[70] to assess and diagnose mental health disorders in young children to help fill a critical gap; and*
  - *Developing a well-trained IECMH workforce by establishing IECMH Centers of Excellence and clinical leadership programs to address mental health needs of infants and toddlers, especially the effects of trauma and other ACEs.*

Policy recommendations related to family resilience and adverse childhood experiences

- Create communities that reinforce family strengths by:
  - *Creating robust new federal and state funding streams to help communities design strategies and implement services and supports to address SDOH, giving every family a place to turn for support as they nurture their young children's development.*

Policy recommendations related to neighborhood safety

- Ensure families' ability to access and sustain safe, stable, and affordable housing through robust funding of federal and state housing assistance.

Neighborhood and Built Environment

The Neighborhood and Built Environment domain of the SDOH framework encompasses various topics relating to the quality of indoor and outdoor environment that affects health, including violence; traffic accidents; air, water, and noise pollution; walkability/bike-ability; green space; housing affordability and quality; smoking policies; and other topics. While the *Yearbook* has few directly related indicators, others provide indirect suggestions that many babies are not receiving screening that could detect environmental harm or are living in housing that could affect their health. Moreover, housing and neighborhoods play critical roles in creating a healthy living environment for babies and pregnant people.

Even before birth, babies are exposed to environmental stressors and pollutants.[71] Exposure to environmental toxins such as lead and air pollutants affects young children's development. For example, lead exposure from chipping lead paint at home can lead to elevated blood lead levels, which affects neurological development.[72,73] Children are physiologically more prone to the harmful effects of pollutants because they take in more air and water in proportion to their body weight.[74] In addition, children's behavior such as putting their hands in their mouths or spending time on or near the ground increases their exposure to toxins. Further, a family's neighborhood is the center of their universe – it determines the opportunities available to them including the grocery stores they have access to, services in their areas including libraries, schools, child care centers, doctors' offices, and other services vital to a family's well-being.

It is important to prevent exposure to unhealthy environmental factors as much as possible during a child's most formative years. While families can take steps at home to minimize exposure, such as not smoking during pregnancy or around children, many of the environmental factors placing young children at risk are still present in the neighborhood. Unfortunately, families often do not have ways to mitigate exposure without financial resources to move away from a neighborhood or housing that poses health risks.

A history of racist policies such as redlining, in which discriminatory policies and practices prevented investments in neighborhoods with Black families and other families of color, have reinforced the unequal distribution of environmental pollution sources and amenities across neighborhoods.[75,76] For example, neighborhoods with higher proportions of Black and Hispanic residents tend to have more air pollution

sources,[77,78] as well as fewer amenities beneficial to children's healthy cognitive development such as green spaces and walkable paths.[79,80,81] As a result, a greater number of babies of color experience environmental harms such as elevated blood lead levels and increased levels of air pollutants in their neighborhoods.[82,83] Furthermore, previously redlined neighborhoods have higher surface temperatures that can contribute to extreme heat events,[84] which are especially dangerous for children and pregnant people.[85]

Environmental exposure disparities do not only affect urban communities. Rural children in general may be more exposed to pesticides through nearby farms or family members who work on farms.[86,87] Pesticide exposure during pregnancy or for young children is linked to various health outcomes, including neurological development and behavioral issues.[88,89,90,91] Indigenous Peoples, comprised of AI/AN and NHOPI, lost nearly 99% of their land due to land theft and federal removal policies.[92,93,94] Lands considered Indigenous (reservations/Indian Country), places where Indigenous Tribal governments are based (as Indigenous Tribes in Alaska are mostly not land holding), and NHOPI islands face higher risk of climate-related disasters such as extreme low precipitation, wildfires, storms, erosion, and flooding than their traditional home areas or areas they lived nomadically between seasons.[95,96,97,98,99] Many Indigenous people live with environmental injustices such as damaged ecosystems, and live near old military sites, nuclear testing sites, oil extraction and pipelines, and often-abandoned mining sites, including uranium, lead, copper, and gold mines.[100,101,102,103] Additionally, the federal government has a history of cutting deals with companies extracting natural resources from AI reservation land at well below market value and at great environmental injustice to Tribes.[104]These injustices result in contaminated soil and water which impacts the health of Indigenous people, pregnant people, and children.[105,106,107]

Looking at the Healthy People 2030 goals in the Neighborhood and Built Environment domain relevant to infants and toddlers, 10 *Yearbook* indicators aligned well with these goals (Table 9).

As readers examine the data presented in this section, the following questions are offered to guide insights into possible policy and programmatic responses:

1. *How do we ensure that we prevent harmful environmental exposures among children and pregnant people in their homes and neighborhoods?*
2. *How do we provide early detection of exposure and effective treatment of health issues related to environmental exposures in health care settings?*
3. *How do we better understand diverse experiences so children and families live in healthier environments?*

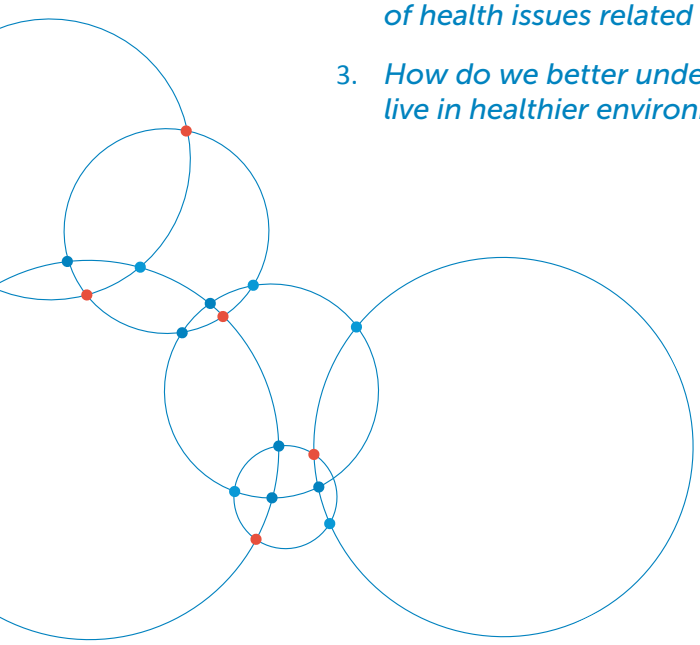


Table 9. Crosswalk Between SDOH Goals for Neighborhood and Built Environment and *Yearbook* Indicators

Healthy People 2030 goals for Neighborhood and Built Environment domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (National)
Children's Health		
Reduce emergency department visits for children under 5 years with asthma Reduce hospitalizations for asthma in children under 5 years Reduce blood lead levels in children aged 1 to 5 years	Uninsured low-income infants and toddlers	5.1%
	Medical home	51.5%
	Medicaid expansion state	39 states
	Preventive medical care received	91.1%
Exposure		
Reduce the number of days people are exposed to unhealthy air Increase the proportion of people whose water supply meets Safe Drinking Water Act regulations Reduce health and environmental risks from hazardous sites Increase the proportion of smoke-free homes Reduce the proportion of people who don't smoke but are exposed to secondhand smoke	Infant mortality rate (deaths per 1,000 live births)	5.6%
	Babies with low birthweight	8.3%
	Babies born preterm	10.2%
Housing and Neighborhood		
Reduce the proportion of families that spend more than 30% of income on housing Reduce the rate of minors and young adults committing violent crimes Reduce deaths from motor vehicle crashes	Crowded housing	15.4%
	Housing instability	2.9%
	Unsafe neighborhoods	5.2%

State Example related to Neighborhood and Built Environment: Minnesota

Minnesota illustrates how data from the *Yearbook* can be applied to the SDOH framework to provide policymakers a deeper perspective of families with babies, their needs related to economic stability, and the extent to which states are responsive to those needs. Analysis of disparities on the aligned indicators in these states offers a more informative view of where differences were determined among babies and families beneath the averages.

Table 10 provides a summary of Minnesota's performance on *Yearbook* indicators related to Neighborhood and Built Environment. Visit the *State of Babies website* to access the *National Profile*, *State Profiles* and the *Compare Indicators* function for all states' results and rankings on any indicator.

Table 10. *Yearbook* Indicators in the Neighborhood and Build Environment Domain for Minnesota

Indicators related to the neighborhood and built environment of families with infants and toddlers in which Minnesota is performing better than the national average	
***Yearbook* Indicator**	**Data/Rank**
Medicaid expansion state	YES
Infant mortality rate (deaths per 1,000 live births)	W
Babies with low birthweight	W
Babies born preterm	W
Unsafe neighborhood	W
Infants and toddlers in poverty [Demographics]	12.8%
Crowded housing	O
Uninsured low-income infants and toddlers	O
Medical home	O

Indicators related to the neighborhood and built environment of families with infants and toddler in which Minnesota still has room to grow	
***Yearbook* Indicator**	**Data/Rank**
Preventive medical care received	G
Housing instability	G

KEY TAKEAWAYS

Applying the SDOH lens to Minnesota's data demonstrates that all states, including those in the top tier, have room for improvement. They can do so by looking more deeply into the data for individual indicators in domains and subdomains of the *Yearbook* data to uncover those areas as they set priorities for next steps in policies to implement and program funding. The state's policymakers and communities might focus on the areas of findings where disparities were largest (e.g., birth outcomes), as well as the continued areas of need related to the receipt of preventive medical care, housing instability, and crowded housing. Notably, Minnesota is recognized as the healthiest state in the nation, yet it acknowledges and intentionally works to address the deep disparities in the health of its AI/AN and Black populations. The state has distinguished itself by centering equity in its public health mission to eliminate these deep disparities. For more than a decade, Minnesota has submitted annual reporting to the state legislature on progress made toward creating "an ecosystem of equity"[108] through the numerous community and cross-sector strategies it has implemented in its Eliminating Health Disparities initiative.[109]

KEY QUESTIONS TO GUIDE POLICY DECISION-MAKING

1. *How do we ensure that we prevent harmful environmental exposures among children and pregnant people in their homes and neighborhoods?*

Housing. Although Minnesota performed better than national average for crowded housing (10.7%) and unsafe neighborhood (1.8%) indicators, stark disparities were evident across income levels for housing and neighborhood indicators. Housing instability was a state-wide issue (state average was 5%, compared to national average of 2.9%), but infants and toddlers in families with low income were 12 times more likely to experienced housing instability (12.7%) than those with above low income (1.1%). Disparities across racial and ethnic groups were also observed for the crowded housing indicator, with much higher percentages of Asian (32.2%), Black (29.7%), Hispanic (20.8%), and AI/AN (20.1%) babies living in crowded housing than reported for the state overall.

Income and race/ethnic disparities around housing are interrelated. Black households in Minnesota have experienced a 40% decrease in household income since 2000 while housing costs have continued to rise.[110] This resulted in a largest home ownership disparity in the nation, with White households 3.3 times more likely to be home owners than Black households.[111] Undocumented immigrants in the Twin Cities are also vulnerable to unfair treatment by landlords.[112,113] This disparity has repercussion for children's health. The data from the Minnesota Department of Health (2014 – 2018) shows that the children under 6-years-old who lived in areas with poverty levels higher than Minnesota average were 3.5 times more likely to have elevated blood lead levels than those who lived in the areas with lower than state average poverty levels.[114]

Neighborhood Safety. Over four times more babies in families with low income (22.3%) lived in crowded housing than babies in families above low income (5.0%). About three times more babies in families with low income (6.1%) lived in unsafe neighborhood compared to those living above low income (2.0%).

2. *How do we ensure we provide early detection of exposure and effective treatment of health issues related to environmental exposures in health care settings?*

Access to health care. Although more babies in Minnesota had medical home (55.8%) than the national average (51.5%), babies in families with above low income were 1.5 times more likely to have medical home (63.7%) than those in families with low income (40.7%).

Preventive care. Minnesota had a much lower percentages of infants and toddlers who received preventive medical care (87.8%) than the national average (91.1%), and income disparity was present. In fact, 79.5% of infants and toddlers in families with low income received preventive medical care compared with 93.8% of infants and toddlers in families living above low income.

Potential exposure-related birth outcomes. Minnesota had lower infant mortality rate, babies born with low birthweight, and babies born preterm than national averages. However, disparities across racial and ethnic groups were evident. Higher percentages of AI/AN (15.5%), multiple race (11.7%), Black (11.1%), and Hispanic (9.8%) babies were born preterm than the state average (9.3%). In addition, higher percentages of AI/AN (9.5%), Black (10.8%), and multiple races (8.9%) were born with low birthweight than state average (8.3%). In some instances, the higher incidence of negative birth outcomes in these populations may be contributed by the greater likelihood of exposure to environmental toxins in the neighborhoods and environments where marginalized communities are more likely to live; therefore, further examination of associations might be conducted by the state.

Policies and Programs that Improve the Neighborhood and Built Environment of Families with Infants and Toddlers

Policy recommendations related to exposure

- Reduce exposure to environmental toxins by
  - *Improving access to health insurance and preventive care so every child can be screened for environmental toxins such as lead*
  - *Improving the monitoring and control of air pollution, particularly heavy metals and other pollutants that affect children's development*
  - *Improving drinking water quality by replacing aging infrastructure and supporting private well owners to test well water quality*
  - *Increasing the visibility and influence of the Environmental Protection Agency's Office of Children's Health Protection*

Policy recommendations related to housing and neighborhoods

- Improve housing and neighborhood quality and safety by
  - *Increasing efforts to remove harmful substances such as lead and asbestos from current housing stock*
  - *Improving and increasing housing stock to ensure it is affordable for families with low income, with housing placements that promote greater mobility*
  - *Promoting increased walkability and green space in neighborhoods that lack these amenities*
  - *Reduce gun violence by increasing the regulations on who can possess guns and the types of weapons allowed to be sold, supporting victims of domestic violence, and increasing research on gun violence*

Policy recommendations related to climate change

- Advance climate change adaptation and mitigation by
  - *Increasing effort to reduce reliance on fossil fuels and move toward renewable energy*
  - *Financing efforts to ensure families can afford services such as utilities and have adequate clean water supplies in states with increasing temperatures*
  - *Increasing early childhood mental health services to help families cope with increasing climate-related disasters*
  - *Educating consumers, including giving tools to parents to talk about climate change with their children*[115]

Policy recommendations related to environmental equity

- Promote equity in exposure to environmental threats by
  - *Ensuring members of potentially affected communities have a voice in decisions on placements of industries, utilities or other infrastructure that impact the environment, as well as climate change adaptation planning*
  - *Centering anti-racism and voice of the communities historically affected by environmental pollution and climate change in research efforts and funding*

Policies and Solutions

An SDOH and Data-Informed Approach to Policy

Review of the SDOH goals and related *Yearbook* findings presented in this report makes clear that the needs of babies and their families in the U.S. are multifaceted and complex. Like the SDOH domains, the issues confronting families are interrelated and require coordinated rather than siloed solutions. To successfully address families' needs, collaborative, cross-sector approaches must be taken to policy planning at the federal, state, local, and community levels – and the policies implemented must be comprehensive and integrated across various systems. To advance health outcomes for families with infants and toddlers, participants should at a minimum include representatives from medical sectors, community services, child development and early learning systems, child welfare systems, community development organizations, housing sectors, and – most importantly – families from the community. Finally, states and communities should look at service delivery approaches that reflect this cross-sector collaboration to address the various drivers of health and development that individual families face.

It is vital to involve parents as trusted partners and advisors in all stages of policy and programmatic decision-making. Parent voice helps policymakers and practitioners fully understand the types of policies and solutions families consider most supportive as they work to promote the healthy development of their babies, families, and communities. Parents and other caregivers can contribute to the collaboration by sharing their lived experiences, the strengths that sustain them, and the barriers they encounter in accessing benefits and services. They also can play an important role as advocates who can obtain the buy-in of other parents in their community. This buy-in is needed to achieve the level of program participation and family engagement in services that is required to sustain the program for the long term.

It is noteworthy that the recommendations of the Committee on Informing the Selection of Leading Health Indicators for Healthy People 2030 include reference to "cross-cutting topics," "shared responsibility," and "multiple sectors."[116]

Embedding Equity in Policy

Policy plays a pivotal role in addressing persistent inequities revealed in the SDOH and *Yearbook* data. As noted in this report, disparities in the health and well-being of babies and families are the byproduct of past and current systems, infrastructures, and policies that have disproportionately burdened and marginalized families based on their race/ethnicity, income level, and geographic locations. These longstanding practices require change on the broadest scale to achieve equity. Developing policies with equity at the center requires both commitment and time to do the hard work of determining the root causes of disparities and crafting responsive solutions. At the same time, the research base and resources focused on equitable policy development are burgeoning in multiple fields (e.g., health, education, and justice).

As emphasized in ZERO TO THREE's recent report, *Addressing Bias and Advancing Equity in State Policy*,[117] "Policy change can occur in multiple ways, via legislative and executive actions or via administrative and organizational practices. Regardless of path, policies should be reviewed regularly along with the data to understand where disparities may occur and where changes and improvements need to be implemented."

Key Policies: Data-driven Prioritization of Policy

Using the *Yearbook* data to describe the SDOH for infants and toddlers helps us gain a deeper understanding of common threads, themes, and areas of need across SDOH domains that can assist policymakers, advocates, and community stakeholders in prioritizing policy efforts. Many overarching policies start at the federal level, but can be supplemented at the state level, where effective implementation also takes place. State and local policymakers and practitioners can go further, using the framework to identify communities of babies and families with the greatest disparities and – working in collaboration at county and local levels – prioritize development of policies to eliminate barriers that have prevented families with babies from improving their health outcomes.

The following overarching needs of families with infants and toddlers emerged from our review. For each area of need, we identify key policies that advance the health of babies and families. It is particularly noteworthy that several of the identified policies advance outcomes across domains.

Access to integrated, affordable maternal, pediatric, and family health care

For families experiencing poverty and living with low income, Medicaid is the primary vehicle through which they can access essential health care. For young children, it can also be the gateway to identify developmental concerns and contributing factors. Ensuring families' access to Medicaid is therefore critical.

MEDICAID EXPANSION. Under the Affordable Care Act, states have the option of expanding Medicaid eligibility criteria to a broader group of people, particularly adults who may otherwise not be covered. In addition to improving access to health care to many parents, expanded eligibility for Medicaid coverage has been shown to improve children's use of preventive care,[118] reduce infant mortality,[119] lower families' out-of-pocket medical expenditures,[120] and reduce the amount of unpaid medical bills.[121] At the time of this report's release, 39 states had adopted or implemented Medicaid expansion. States that have not adopted Medicaid expansion can receive incentives to do so.

POSTPARTUM EXTENSION OF MEDICAID. The postpartum period (the year after delivery) is an important time for both parent and baby. Parents can face a variety of health challenges postpartum, including depression, anxiety, pain, and complications that may have taken place during childbirth, such as high blood pressure. The high rate of maternal mortality in the U.S. argues for extending Medicaid coverage during the postpartum period. While states provide pregnant people with Medicaid benefits, only three states at the time of data collection for the *Yearbook* extended eligibility beyond the nationally mandated 60 days postpartum.[122] However, to date, 25 states and the District of Columbia have adopted the option in ARPA, available for 5 years, to extend Medicaid and CHIP postpartum coverage to 12 months, while eight more have plans to adopt it and 2 have proposed limited coverage.[123]

Sufficient income to ensure and maintain a stable environment and lead to self-sufficiency

To build an equitable economic base and achieve stability, families need a range of national policies that bolster economic security when children are young and their development is most sensitive to material hardship. Economic supports through higher wages, tax credits, and direct assistance through TANF benefits are particularly critical for families with young children and directly contribute to lifting families out of poverty.

CHILD TAX CREDIT. CTC is a federal program for parents earning low and moderate incomes,[124] with six states providing their own credits. The CTC is child-focused, helping pay for the cost of raising children.[125] The enhanced CTC under ARPA allowed all children in families at the lower end of the income spectrum to qualify, dramatically reducing child poverty while in effect. Full refundability allowed the young children most in need of income support (those in families with the lowest incomes or no working adults) to benefit from increased access to the resources important for early development. Because the CTC also serves middle-income and most upper-middle-income families, more families qualify for this tax credit than families under the EITC. Research suggests that families receiving

a larger refundable tax credit have children who do better in school, have a higher chance of going to a university, and will likely earn more as adults.[126]

EARNED INCOME TAX CREDIT. EITC is a federal tax credit for working people earning low and moderate incomes. The EITC provides workers with a tax credit that is applied to some or all of a worker's federal tax obligation, serving as a supplemental source of income. The EITC is currently targeted toward workers who are raising children, with eligibility depending on the worker's income, marital status, and number of children. 31 states have their own EITC. Research has found that children who are beneficiaries of greater state or federal EITCs obtain better test scores, compared with similar families who receive lesser amounts.[127]

A LIVING MINIMUM WAGE. The most efficient way to help families achieve economic stability is to ensure a living wage through a minimum wage of at least $15 per hour.[128] Although it is not among the indicators captured in the *Yearbook,* a living minimum wage provides the additional financial support that families with infants and toddlers can apply to stable housing, eliminating food insecurity, accessing medicine, and reducing stress at home—all of which play a critical role in creating an environment ideally suited to child development. Recent research finds that a national minimum wage of $15 an hour would lift between 6.9 and 7.6 million people out of poverty.[129] States often have parallel policies that can exceed federal policy, as with the current minimum wage. At the time of the *Yearbook's* release, only California and the District of Columbia had implemented a $15 minimum wage, while Florida, New Jersey, and Rhode Island had passed legislation to achieve the $15 hourly rate by 2025 or 2026.[130]

TANF BENEFITS REFORM. The TANF program was designed to help families living with low income and minor children with cash assistance, particularly while parents are seeking employment. However, states are allowed to spend TANF funds for a variety of other activities (e.g., administrative costs, child care and pre-K programs, child welfare services, and work support activities) in addition to directly supporting families. TANF's reach has declined over the years to the point where, in 2019, only 23 out of every 100 families experiencing poverty received any TANF benefits, with access being especially challenging for Black families.[131] Similarly, fulfilling Tribal TANF benefit requirements can be difficult for AI/AN families due to limited employment opportunities, distance to available jobs, health, transportation, and child care issues.[132] Because receiving TANF benefits increases access to resources that contribute to healthy development, it is critical that funding of state and tribal grants be increased from their 1997 levels.[133]

FOOD ASSISTANCE. Food security is bound up in economic stability. It is a basic need that in difficult financial times families may be forced to "do without." It is also a need that households experience even when their income places them above the poverty line. Food assistance can relieve economic stress as it relieves hunger. SNAP benefits often do not last through the month, so increased benefits are needed to help families stretch their budgets. Increased eligibility and outreach to more eligible families could provide help families with modest incomes need to become food secure and more economically stable. WIC directly helps pregnant people and families with young children higher quality nutrition, which can improve child health, and connects families to other services. Increasing outreach to eligible families, providing higher benefits, and continuing flexibility could all improve access to the program.

Time to bond and form healthy relationships with one's babies

PAID FAMILY LEAVE. In the absence of a federal paid family leave policy, states vary widely on if and how they require paid family leave. Family leave is used primarily to care for a newborn child, but also to meet other exceptional caregiving needs, such as to care for family members and relatives who have daily challenges due to aging, disabilities, chronic health conditions, or a newly adopted child. In addition to economic benefits for families, paid family leave promotes parent-infant bonding and can increase the likelihood of breastfeeding, lessen the likelihood of postpartum depression, promote fathers' involvement in child-rearing, increase birthing people's attachment to the labor force, and reduce reliance on public assistance.[134]

Strong social-emotional development and mental health

IECMH SERVICES. Mental health concerns arising during the first years of life can develop into serious problems if not identified and treated promptly.[135] Families with low incomes may not be able to afford these services unless they are covered by Medicaid. To provide more robust services, state Medicaid plans can cover IECMH services in any of the following settings: home, pediatric/family medicine practices, and early care and education programs. States can designate new mental health funding for infants and toddlers available through the Community Mental Health Block Grant toward expanding the IECMH workforce; improving the quality of services available to young children and families; increasing knowledge of IECMH among professionals who see young children most; and strengthening systems and networks for identification and referral to reach more young children in need. To build on these efforts, states can ensure coverage of IECMH services that include multigenerational therapies for babies and caregivers.

Adequate, affordable housing

HOUSING ASSISTANCE. The impact of housing on babies' physical and emotional health crosses multiple SDOH domains, making policies to expand the affordable housing supply and families' ability to access it a central point in the policy toolbox. Housing assistance can help relieve overcrowding and prevent families from becoming unhoused. It contributes to economic stability, reducing family stress. It can promote healthier development and is especially effective when combined with food assistance.[136] Investing in increasing affordable housing stock revitalizes neighborhoods and expands possibilities for families. Expanding housing vouchers, which currently reach only about a quarter of eligible households,[137] can give families more mobility in choosing neighborhoods in which to raise their young children.

Comprehensive early care and learning opportunities

CHILD CARE. As a key foundation for a strong economy, as well as for young children's healthy development, child care is a public good. However, in practice, the U.S. treats child care as a private responsibility, offering little to no support for most families who need child care. As a result, our child care system is defined by high parent fees and prohibitively low wages for early educators, ensuring that many families who need developmentally-supportive care to work or go to school will not be able to access it.

The federal government provides support to some families to alleviate the cost of care through CCDBG, which provides subsidies for l working families with low income to help defray the cost of child care in their communities. However, at current funding levels, just one in seven eligible families with incomes below 85 % of their state median income can access a subsidy, and the value of those subsidies often falls far short of the cost of providing high-quality care.[138] The COVID-19 pandemic had a devastating impact on this already fragile system, forcing thousands of providers across the country to permanently close their doors, while many others have been forced to work at reduced capacity due to challenges in hiring and retaining staff. Significant, short-term relief funding, including $25 billion in child care stabilization funding has temporarily prevented the complete collapse of the child care sector, saving more than three million child care slots across the country by one estimation, but that funding is set to begin expiring at the end of FY23, while structural challenges that existed long before the pandemic remain unaddressed. Congress must invest continued funding now to ensure the stability of the child care sector in the face of impending funding cliffs,[139] while prioritizing the long-term, sustained investments necessary to build a child care system that ensures all families with young children have equitable access to high-quality, affordable child care that meets their children's developmental needs, and that all early educators are compensated in a manner that reflects the critically important work they do.

EARLY HEAD START: Since its inception, EHS's mission has been to support early development by recognizing children in the essential context of their families and communities. EHS programs use a two-generation model to serve the most overburdened and under-resourced children and families in their communities. Comprehensive services are individualized to the needs and resources of each child and family and leverage an array of community services. For babies and

families with incomes below the federal poverty line, EHS's comprehensive approach can address multiple SDOH domains. Currently serving only about 11% of income eligible children, EHS should be on a track to serve all eligible infants and toddlers and increase the number of pregnant people served.

EARLY INTERVENTION: Part C of IDEA funds critically needed, comprehensive early intervention services to infants and toddlers with disabilities and their families. Unfortunately, funding for the program over the past two decades has failed to keep pace with the increased costs of providing these services, as well as the increased number of children needing services. These challenges have been further exacerbated by the pandemic, which has had a particularly negative impact on the material and emotional well-being of families with children who have special needs. Funding for Part C Early Intervention services should be sufficient to address the comprehensive and growing needs of all eligible families, while also incentivizing more states to expand services to at-risk infants and toddlers, as well as those with documented disabilities or delays.

Cross-cutting approaches and systems of care

While these policies are important building blocks for strong families and healthy children, families also need support that looks across the SDOH domains and helps them meet a range of needs, identify and address stressors, and foster strong parenting skills to nurture children's development.

Such approaches including home visiting, embedding child development specialists in primary pediatric care (such as the HealthySteps approach), and Family Resource Centers, were mentioned in the Social and Community Context section. They often incorporate an awareness of SDOH in their work with families. In addition to ensuring the availability of key services across the SDOH domains, federal and state policies need to support communities in building systems of care for families, especially those with young children, that create better access to supports.

Call for Better Data Collecting And Reporting

Lastly, we continue the call for better data collection and reporting, as well as increased funding, to ensure national data sets are updated on an annual basis. Throughout this report we have highlighted where subgroup data for indicators are not available, have not been updated, or are otherwise unavailable to reliably report.

There is no more important place to have data for as many segments of our population as possible than in the discussion of SDOH and the well-being of the nation's babies and families. Most importantly, disaggregated data is essential. The value of the data available in the multiple national data sets that are the source for the selected indicator findings cannot be understated; however, the value is increased further by the availability of findings in disaggregated form.

In addition to the frequency and form of data available, there are several areas where data can be improved to broaden our understanding of families with young children and better address their needs in policies. Examples of measures that will amplify the understanding of and ability to respond to the impact of poverty on mothers and babies include maternal age and education at birth of first child, adult or family literacy, ratio of minimum wage to estimated living wage, longevity of/volatility in dependence upon social safety net, hardship measures, and opportunity indicators.

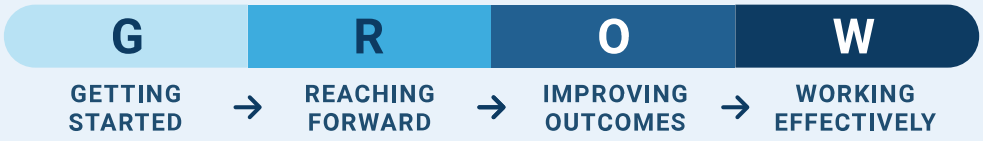
Closing

A growing number of state and community-level initiatives are seeking to "make social determinants of health actionable."[140] Much of this work originated in the health sector. As noted in reference to the Gravity Project—a national collaborative that initially aimed to increase food security, housing stability/quality, and transportation access—"To be truly actionable, a provider needs to be able to transmit the data to a foodbank or social services organization so they can act in a meaningful way for the patients in question. Actionable data is also useful for state agencies that can start collecting the information and analyzing what they need to have in place to cater to their population."[141] It is the hope of the authors that this report provides an example of using the SDOH and other frameworks as a tool for deeper analysis and application of data to achieve just that.

Appendices

Appendix A. *State of Babies Yearbook 2022* Ranking Methodology

The GROW symbols designate the tiers, from lowest to highest, referring to the different stages of growth in terms of well-being and policies. These symbols are used in the state profiles and throughout the *Yearbook* to designate a given state's placement on this GROW scale. Each indicator for a state also falls along the scale, visible in the state's profile.



Data provided in individual state profiles, in conjunction with the rankings, provide policymakers and advocates a resource to inform decision making and serve as a catalyst to make investments and implement strategic changes in areas of identified need. A comprehensive view of each state's profile data is available at stateofbabies.org.

STATE OF BABIES YEARBOOK 2022: OVERALL RANKINGS Table 2.

Working Effectively G R O W	Colorado Connecticut District of Columbia	Maine Maryland Massachusetts	Minnesota New Jersey Oregon	Rhode Island Vermont Washington
Improving Outcomes G R O W	Alaska California Delaware Hawaii	Illinois Iowa Missouri	Montana New Hampshire New York	Pennsylvania Virginia Wisconsin
Reaching Forward G R O W	Indiana Kansas Michigan Nebraska	New Mexico North Carolina Ohio	Oklahoma North Dakota South Dakota	Tennessee Utah West Virginia
Getting Started G R O W	Alabama Arizona Arkansas Florida	Georgia Idaho Kentucky	Louisiana Mississippi Nevada	South Carolina Texas Wyoming

Appendix B. State of Babies Yearbook 2022 Domains, Subdomains, and Indicators

Good Health		Included in ranking
Health Care Coverage and Affordability	Medicaid expansion state	✔
	Eligibility limit (% Federal Poverty Level [FPL]) for pregnant women in Medicaid	✔
	Children's Health Insurance Program (CHIP) Maternal Coverage for Unborn Child option	
	Postpartum extension of Medicaid coverage	
	Uninsured low-income infants and toddlers	✔
	Medical home	✔
Nutrition	Infants ever breastfed	
	Infants breastfed at 6 months	✔
	High weight-for-length	
	Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) coverage	✔
Maternal Health	Accommodations for pregnant workers, protection from job loss	✔
	Late or no prenatal care received	✔
	Maternal mortality (deaths per 100,000 live births)	
	Mothers reporting less than optimal mental health	✔
	State Medicaid policy for maternal depression screening in well-child visits	✔
Children's Health	Babies born preterm	✔
	Babies with low birthweight	✔
	Infant mortality rate (deaths per 1,000 live births)	✔
	Preventive medical care received	✔
	Preventive dental care received	✔
	Recommended vaccines received	✔
Children's Mental Health Services	Medicaid plan covers social-emotional screening for young children	✔
	Medicaid plan covers infant and early childhood mental health (IECMH) services at home	✔
	Medicaid plan covers IECMH services at pediatric/family medicine practices	✔
	Medicaid plan covers IECMH services at early childhood education programs	✔

Strong Families		Included in ranking
Basic Needs	Temporary Assistance for Needy Families (TANF) benefits receipt among families in poverty	✔
	Housing instability	✔
	Crowded housing	✔
	Unsafe neighborhoods	✔
	Low or very low food security	✔

Child Well-being and Resilience	Family resilience	✔
	1 adverse childhood experience (ACE)	
	2 or more ACEs	✔
	Infant/toddler maltreatment rate (per 1,000 children ages 0–2)	
	Removed from home	
	Time in out-of-home placement	
	Permanency: Adopted	
	Permanency: Guardian	
	Permanency: Relative	
	Permanency: Reunified	
	Potential home-visiting beneficiaries served	✔
Supportive Policies	Paid family leave	✔
	Paid sick time that covers care for child	✔
	TANF work exemption	✔
	State Child Tax Credit (CTC)	✔
	State Earned Income Tax Credit (EITC)	✔

Positive Early Learning Experiences		**Included in ranking**
Elements that Support Child Care Quality	Adult-child ratio	✔
	Teacher qualifications	✔
	Group size	✔
	Infant/toddler professional credential	
Activities that Support Early Learning	Parent reads to baby every day	✔
	Parent sings to baby every day	✔
Access to Early Learning Programs	% Income-eligible infants/toddlers with Early Head Start access	✔
	Families above 200% of FPL eligible for child care subsidy	✔
	Allocated Child Care and Development Block Grant (CCDBG) funds	✔
	State reimburses center-based child care	✔
	Low-/moderate-income infants/toddlers in Child Care and Development Fund (CCDF)-funded care	✔
	Cost of care, as % of income (married families)	
	Cost of care, as % of income (single parents)	
Early Intervention	Developmental screening received	✔
	At-risk children included in Part C eligibility definition	
	Percentage of infants/toddlers receiving Individuals With Disabilities Education Act (IDEA) Part C services	✔
	Timeliness of Part C services	✔

Appendix C. Detailed Methodology for Examining the Alignment Between the SDOH Framework and Yearbook Subdomains

In order to create the crosswalk between the Social Determinants of Health (SDOH) framework and the *State of Babies Yearbook* (the *Yearbook*), we first compared *Yearbook* indicators with the goals listed on the Healthy People 2030 website[142] under each SDOH domain. For each SDOH domain (see Tables C-1 to C-5 below), we selected the Healthy People 2030 goals that were relevant to infants and toddlers and families, such as, "access to health care coverage"; "eliminate very low food security in children"; or "increase the proportion of children with developmental delays who get intervention services by age 4 years." Then, we looked for *Yearbook* indicators that were relevant to the objectives, such as (considering the examples above) "low or very low food security," "WIC coverage," or "developmental screening received."

Sometimes we selected indicators that were relevant in a less obvious way. For example, in relation to the objective "Increase the proportion of children living with at least one parent who works full time," we selected indicators such as "paid family leave," "paid sick time that covers care for child," and "accommodations for pregnant workers, protection from job loss," which helps parents stay in their jobs after having children.

Table C-1. Crosswalk Between SDOH Goals for Health Care Access and Quality and the Yearbook Indicators

Healthy People 2030 goals for Health Care Access and Quality domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national average)
Maternal Health		
Access to health care coverage • Increase the proportion of people with health insurance	Medicaid expansion state	39 states
	Eligibility limit (% FPL) for pregnant women in Medicaid	200
	CHIP Maternal Coverage for Unborn Child option	17 states
	Extension of Medicaid coverage for pregnant women postpartum	48 states—no law beyond mandatory 60 days; 3 states—law covering either(a) some women but not all, or (b) all women but for less than 1 year; 0 states—law covering all women for 1 year postpartum
Access to primary care • Increase the proportion of pregnant women who receive early and adequate prenatal care	Late or no prenatal care received	6.4%

Child Health		
Access to health care coverage • Increase the proportion of people with health insurance	Uninsured low-income infants and toddlers[a]	5.1%
Access to primary care • Increase the proportion of people with a usual primary care provider • Reduce the proportion of people who can't get medical care when they need it • Reduce the proportion of people who can't get the dental care they need when they need it	Medical home	51.5%
	Preventive medical care received[a]	91.1%
	Preventive dental care received[a]	34.5%
	Received recommended vaccines	72.7%
Access to health care services • Increase the ability of primary care and behavioral health professionals to provide more high-quality care to patients who need it	Mothers reporting less than optimal mental health	21.9%
	Medicaid plan covers maternal depression screening during well-child visits	44 states
	Medicaid plan covers social-emotional screening for young children	43 states
	Medicaid plan covers IECMH services—at home[b]	49 states
	Medicaid plan covers IECMH services—in medical settings[b]	46 states
	Medicaid plan covers IECMH services—in ECE settings[b]	34 states

Table C-2. Crosswalk Between SDOH Goals for Economic Stability and the *Yearbook* Indicators

Healthy People 2030 elements and goals for Economic Stability SDOH domain relevant for infants and toddlers	*Yearbook* indicators	National data
Poverty and income security • Reduce the proportion of people living in poverty	Infants and toddlers in poverty	18.6%
	TANF benefits receipt among families in poverty	18.5%
	TANF work exemption	24 states
	State CTC	6 states
	State EITC	31 states
	Paid family leave	10 states
	Paid sick time that covers care for child	14 states

Employment security • Increase the proportion of children living with at least one parent who works full time	Infants and toddlers with no working parents	5.5%
	Accommodations for pregnant workers, protection from job loss	All employees covered (private and state) (5 states); State employees only (3 states); Limited coverage: State employees and private employees with exceptions (23 states); No protections (20 states)
Housing stability • Reduce the proportion of families that spend more than 30 % of income on housing	Housing instability (3+ moves)	2.9%
	Crowded housing	15.4%
Food security • Eliminate very low food security in children	Low or very low food security	14.9%
	WIC coverage	Range: 64.7% - 100% 46 states (including DC) at or above 80%
• Reduce the proportion of people living in poverty • Increase the proportion of children living with at least one parent who works full time • Reduce the proportion of families that spend more than 30 % of income on housing • Eliminate very low food security in children	TANF benefits receipt among families in poverty Housing instability Crowded housing Low or very low food security	Strong Families
	Paid family leave Paid sick time that covers care for child TANF work exemption State CTC State EITC	
	Accommodations for pregnant workers, protection from job loss	Good Health
	Infants ever breastfed Infants breastfed at 6 months High weight-for-length WIC coverage	

Table C-3. Crosswalk Between SDOH Goals for Education Access and Quality and the *Yearbook* Indicators

Healthy People 2030 goals for Education Access and Quality domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national average)
Access to high-quality early childhood education. • Increase the proportion of children who participate in high-quality early childhood education programs	Income-eligible infants and toddlers with EHS access	11%
	Low-/moderate-income (< 150% of FPL) infants and toddlers in CCDF-funded care	4.6%
	Families above 200% of FPL eligible for child care subsidy	16 states
	Group size requirements meet or exceed EHS standards	23 states[j] (16 states for one age group, six states for two age groups, one state for three age groups)
	Adult/child ratio requirements meet or exceed EHS standards	35 states[k] (21 states for one age group, 12 states for two age groups, two states for three age groups)
	Teacher qualifications	6 states – CDA/state equivalent (45 states – no credential beyond high school)
	Infant/toddler professional credential	30 states
	State allocated new CCDBG funds to invest in infant/toddler care	34 states
School readiness/ Early literacy • Increase the proportion of children who are developmentally ready for school	Parent reads to baby every day	36.8%
	Parent sings to baby every day	57.3%
Early intervention • Increase the proportion of children with developmental delays who get intervention services by age 4 years	Developmental screening received	33.8%
	At-risk children included in IDEA Part C eligibility definition	6 states
	Percentage of infants and toddlers IDEA Part C services	7.2%
	Timeliness of Part C services	Range: 79.2 – 100% 36 states = 95% or above

j 23 states meet or exceed the requirement for one of the ages (infants), 6 states achieve it for two ages (infants and toddlers), and only 1 state achieves it for all three ages.

k 21 states meet or exceed the standard for one of the ages (infants), 12 states achieve it for two ages (infants and one-year-olds), and 2 states achieve it for all three ages, including 2-year-olds.

Table C-4. Crosswalk Between SDOH Goals for Social and Community Context and the *Yearbook* Indicators

Healthy People 2030 goals for Social and Community Context SDOH domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national average)
Increase the proportion of children and adolescents who show resilience to challenges and stress	Family resilience	84.2%
	Babies living in unsafe neighborhoods	5.2%
	Babies with two or more ACEs	7.3%
Increase the proportion of children and adolescents who communicate positively with their parents	Mothers reporting less than optimal mental health	21.9%
	State Medicaid policy for maternal depression screening in well-child visits	Required (8 states); Recommended (27 states); Allowed (9 states); No policy (7 states)
	Medicaid plan covers social-emotional screening for young children	44 states
	Medicaid plan covers IECMH services at home	49 states
	Medicaid plan covers IECMH services at pediatric/family medicine practices	46 states
	Medicaid plan covers IECMH services at early childhood education programs	34 states
	Potential home visiting beneficiaries served	2.10%

Table C-5. Crosswalk Between SDOH Goals for Neighborhood and Built Environment and the *Yearbook* Indicators

Healthy People 2030 goals for Neighborhood and Built Environment SDOH domain relevant for infants and toddlers	*Yearbook* indicators	*Yearbook* data (national)
Children's Health		
Reduce emergency department visits for children under 5 years with asthma Reduce hospitalizations for asthma in children under 5 years Reduce blood lead levels in children aged 1 to 5 years	Uninsured low-income infants and toddlers	5.1%
	Medical home	51.5%
	Medicaid expansion state	39 states
	Preventive medical care received	91.1%

Exposure		
Reduce the number of days people are exposed to unhealthy air Increase the proportion of people whose water supply meets Safe Drinking Water Act regulations Reduce health and environmental risks from hazardous sites Increase the proportion of smoke-free homes Reduce the proportion of people who don't smoke but are exposed to secondhand smoke	Infant mortality rate (deaths per 1,000 live births)	5.6%
	Babies with low birthweight	8.3%
	Babies born preterm	10.2%
Housing and Neighborhood		
Reduce the proportion of families that spend more than 30 % of income on housing Reduce the rate of minors and young adults committing violent crimes Reduce deaths from motor vehicle crashes	Crowded housing	15.4%
	Housing instability	2.9%
	Unsafe neighborhoods	5.2%

Endnotes

1 Center on the Developing Child (2017). *Brain architecture*. Harvard University. https://developingchild.harvard.edu/science/key-concepts/brainarchitecture/#neuron-footnote

2 Regional Office for Europe. (2014). *The case for investing in public health: a public health summary report for EPHO 8*. World Health Organization. https://www.euro.who.int/__data/assets/pdf_file/0009/278073/Case-Investing-Public-Health.pdf

3 Commission on Social Determinants of Health. (2008). *Closing the gap in a generation: health equity through action on the social determinants of health*. World Health Organization. https://apps.who.int/iris/bitstream/handle/10665/43943/9789241563703_eng.pdf?sequence=1

4 Office of Disease Prevention and Health Promotion. (n.d.). *Social determinants of health*. U.S. Department of Health and Human Services. https://health.gov/healthypeople/priority-areas/social-determinants-health

5 Nicholson, P. & Morris, D. (2020). *SDOH: An emerging population health priority*. Healthcare Financial Management Association. https://www.hfma.org/topics/financial-sustainability/article/SDOH--an-emerging-population-health-priority.html

6 Office of Disease Prevention and Health Promotion. (n.d.). *Social determinants of health*. U.S. Department of Health and Human Services. https://health.gov/healthypeople/priority-areas/social-determinants-health

7 American Medical Association. (2021, November 9). *What is structural racism?* https://www.ama-assn.org/delivering-care/health-equity/what-structural-racism

8 CommonHealth ACTION. (2016). *Leveraging the social determinants to build a culture of health.* Robert Wood Johnson Foundation. https://healthequity.globalpolicysolutions.org/wp-content/uploads/2016/12/RWJF_SDOH_Final_Report-002.pdf

9 Yearby, R. (2020, September 22). Structural racism: the root cause of the social determinants of health. *Bill of Health*. https://blog.petrieflom.law.harvard.edu/2020/09/22/structural-racism-social-determinant-of-health/

10 Paradies, Y., Ben, J., Denson, N., Elias, A., Priest, N., Pieterse, A., Gupta, A., Kelaher, M., & Gee, G. (2015). Racism as a determinant of health: a systematic review and meta-analysis. *PLOS ONE*, 10(9), e0138511. https://doi.org/10.1371/journal.pone.0138511

11 Trent, M., Dooley, D. G., & Dougé, J. (2019). The impact of racism on child and adolescent health. *Pediatrics*, 144(2), e20191765. https://doi.org/10.1542/peds.2019-1765

12 Chapman, E. N., Kaatz, A., & Carnes, M. (2013). Physicians and implicit bias: how doctors may unwittingly perpetuate health care disparities. *Journal of General Internal Medicine*, 28(11), 1504–1510. https://doi.org/10.1007/s11606-013-2441-1

13 Chinn, J. J., Martin, I. K., & Redmond, N. (2020). Health equity among black women in the United States. *Journal of Women's Health*, 30(2), 212–219. https://doi.org/10.1089/jwh.2020.8868

14 Khan, N. (2016, June 20). *The lasting fallout of the Tuskegee Syphilis Study*. JSTOR Daily. https://daily.jstor.org/the-lasting-fallout-of-the-tuskegee-syphilis-study/

15 Carmon, I. (2014, June 26). *For eugenic sterilization victims, belated justice*. MSNBC.com. https://www.msnbc.com/all/eugenic-sterilization-victims-belated-justice-msna358381

16 Blakemore, E. (2016, August 25). *The little-known history of the forced sterilization of Native American women*. JSTOR Daily. https://daily.jstor.org/the-little-known-history-of-the-forced-sterilization-of-native-american-women/

17 Lawrence, J. (2000). The Indian Health Service and the sterilization of Native American women. *American Indian Quarterly*, 24(3), 400–419. https://www.jstor.org/stable/1185911?mag=the-little-known-history-of-the-forced-sterilization-of-native-american-women&seq=1

18 Petersen, E. E., Davis, N. L., Goodman, D., Cox, S., Mayes, N., Johnston, E., Syverson, C., Seed, K., Shapiro-Mendoza, C. K., Callaghan, W. M., & Barfield, W. (2019). Vital signs: pregnancy-related deaths, United States, 2011–2015, and strategies for prevention, 13 states, 2013–2017. *Morbidity and Mortality Weekly Report*, 68(18), 423–429. https://doi.org/10.15585/mmwr.mm6818e1

19 Hoyert, D. (2022). Maternal mortality rates in the United States, 2020. *NCHS Health E-Stats*. https://dx.doi.org/10.15620/cdc:113967

20 Wilkinson, A., Laurore, J., Maxfield, E., Gross, E., Daily, S., & Keating, K. (2021). *Racism creates inequities in maternal and child health, even before birth*. https://zerotothree.wpenginepowered.com/wp-content/uploads/2022/05/Racism-Creates-Inequities-in-Maternal-and-Child-Health-Even-Before-Birth.pdf

21 Howell, E. (2018). Reducing disparities in severe maternal morbidity and mortality. *Clinical Obstetrics and Gynecology*, 61(2), 1. https://doi.org/10.1097/grf.0000000000000349

22 Center for Healthcare Quality and Payment Reform. (n.d.). *The crisis in rural health care*. https://ruralhospitals.chqpr.org/#:~:text=More%20than%20130%20rural%20hospitals,money%20delivering%20services%20to%20patients

23 Centers for Medicare and Medicaid Services. (n.d.) *Improving access to maternal health care in rural communities*. https://www.cms.gov/About-CMS/Agency-Information/OMH/equity-initiatives/rural-health/09032019-Maternal-Health-Care-in-Rural-Communities.pdf

24 Hung, P., Henning-Smith, C. E., Casey, M. M., & Kozhimannil, K. B. (2017). Access to obstetric services in rural counties still declining, with 9 % losing services, 2004–14. *Health Affairs*, 36(9), 1663–1671. https://doi.org/10.1377/hlthaff.2017.0338

25 Kozhimannil, K. B., Hung, P., Henning-Smith, C., Casey, M. M., & Prasad, S. (2018). Association between loss of hospital-based obstetric services and birth outcomes in rural counties in the United States. *JAMA*, 319(12), 1239. https://doi.org/10.1001/jama.2018.1830

26 Grzybowski, S., Stoll, K., & Kornelsen, J. (2011). Distance matters: A population based study examining access to maternity services for rural women. *BMC Health Services Research*, 11(1), 147. https://doi.org/10.1186/1472-6963-11-147

27 National Advisory Committee on Rural Health and Human Services. (2020). *Maternal and obstetric care challenges in rural America: policy report and recommendations to the Secretary*. https://www.hrsa.gov/sites/default/files/hrsa/advisory-committees/rural/publications/2020-maternal-obstetric-care-challenges.pdf

28 Kozhimannil, K. B., Interrante, J. D., Henning-Smith, C., & Admon, L. K. (2019). Rural-urban differences in severe maternal morbidity and mortality in the US, 2007–15. *Health Affairs*, 38(12), 2077–2085. https://doi.org/10.1377/hlthaff.2019.00805

29 Dewees, S. & Marks, B. (2017). *Twice invisible: understanding rural Native America*. First Nations Development Institute. https://www.usetinc.org/wp-content/uploads/bvenuti/WWS/2017/May%202017/May%208/Twice%20Invisible%20-%20Research%20Note.pdf

30 Keating, K. & Heinemeier, S. (2022). *State of babies yearbook: 2022*. ZERO TO THREE. http://stateofbabies.org/wp-content/uploads/2022/04/State-of-Babies-2022-Yearbook.pdf

31 Hung, P., Henning-Smith, C. E., Casey, M. M., & Kozhimannil, K. B. (2017). Access to obstetric services in rural counties still declining, with 9 % losing services, 2004–14. *Health Affairs*, 36(9), 1663–1671. https://doi.org/10.1377/hlthaff.2017.0338

32 Centers for Disease Control and Prevention. (2021). *About social determinants of health*. https://www.cdc.gov/socialdeterminants/about.html

33 Chester, A., Schmit, S., Alker, J., & Golden, O. (2016). *Medicaid expansion promotes children's development and family success by treating maternal depression.* Georgetown University Health Policy Institute, Center for Children and Families. https://ccf.georgetown.edu/wp-content/uploads/2016/07/Maternal-Depression-4.pdf

34 Oberlander, T. F., Papsdorf, M., Brain, U. M., Misri, S., Ross, C., & Grunau, R. E. (2010). Prenatal effects of selective serotonin reuptake inhibitors antidepressants, serotonin transporter promoter genotype (SLC6A4), and maternal mood on child behavior at 3 years of age. *Archives of Pediatrics & Adolescent Medicine, 164*(5), 444-451. *https://doi.org/10.1001/archpediatrics.2010.51*

35 Hops, H. (1995). Age- and gender-specific effects of parental depression: A commentary. *Developmental Psychology,* 31(3), 428-431. *https://doi.org/10.1037/0012-1649.31.3.428*

36 Rubideaux, Y. (2009). Healthcare Reform in Indian Country. Keynote Address: Johns Hopkins Native American Heritage Month.

37 Wilkinson, A., Laurore, J., Maxfield, E., Gross, E., Daily, S., & Keating, K. (2021). *Racism creates inequities in maternal and child health, even before birth*. https://zerotothree.wpenginepowered.com/wp-content/uploads/2022/05/Racism-Creates-Inequities-in-Maternal-and-Child-Health-Even-Before-Birth.pdf

38 Reichman, N. (2005). Low birth weight and school readiness. *The Future of Children, 15*(1), 91–116. https://doi.org/10.1353/foc.2005.0008

39 United Health Foundation. (2021). *America's health rankings: Uninsured women, South Carolina, United States.* https://www.americashealthrankings.org/explore/health-of-women-and-children/measure/Uninsured_women/state/SC

41 Office of Disease Prevention and Health Promotion. (n.d.). Economic Stability. *Healthy People 2030*. U.S. Department of Health and Human Services. https://health.gov/healthypeople/objectives-and-data/browse-objectives/economic-stability

42 Yu, J., Patel, R., Haynie, D., Vidal-Ribas, P., et al. (2022) Adverse childhood experiences and premature mortality through mid-adulthood: A five-decade prospective study. The Lancet Regional Health - Americas 2022;00:1003439 https://www.sciencedirect.com/science/article/pii/S2667193X22001661?via%3Dihub

43 Center for Translational Neuroscience. (2021). Rapid Assessment of Pandemic Impact on Development Early Childhood Household Survey Project. University of Oregon [data set]. https://ctn.uoregon.edu/projects/rapid-assessment-pandemic-impact-development-rapid-early-childhood

44 Office of the Assistant Secretary for Planning and Evaluation. (2022). *HHS Poverty Guidelines for 2022.* U.S. Department of Health and Human Services. https://aspe.hhs.gov/topics/poverty-economic-mobility/poverty-guidelines

45 Mason, J. and Acosta, P.M. (2021). *Called to care: A racially just recovery demands paid family and medical leave*. National Partnership for Women and Families. https://www.nationalpartnership.org/our-work/economic-justice/reports/called-to-care-a-racially-just-demands-paid-family-and-medical-leave.html

46 Forum on Child and Family Statistics (2021). *America's children: Key national indicators of well-being, 2021—Housing problems*. Childstats.gov - America's Children: Key National Indicators of Well-Being, 2021 - Physical Environment and Safety Housing Problems

47 Coleman-Jensen, A., McFall, W., & Nord, M. (2013). *Food insecurity in households with children: Prevalence, severity, and household characteristics, 2010-11*. U.S. Department of Agriculture, Economic Research Service. https://www.ers.usda.gov/publications/pub-details/?pubid=43765

48 Zaslow, M., Bronte-Tinkew, J., Capps, R., Horowitz, A., Moore, K. A., & Weinstein, D. (2009). *Food security during infancy: Implications for attachment and mental proficiency in toddlerhood.* Maternal and Child Health Journal, 13(1), 66-80. DOI 10.1007/s10995-008-0329-1

49 Rose-Jacobs, R., Black, M. M., Casey P. H., Cook, J. T., Cutts, D. B., Chilton, M., Heeren, T., Levenson, S. M., Meyers, A. F., & Frank, D. A. (2008). Household food insecurity: Associations with at-risk infant and toddler development. Pediatrics, 121(1), 65-72. https://doi.org/10.1542/peds.2006-3717

50 Pedulla, D.S. and Pager, D. (2019). Race and networks in the job search process. *American Sociological Review, 84(6)*. https://journals.sagepub.com/doi/full/10.1177/0003122419883255

51 Keating, K. (2021). *TANF at 25: Poverty remains high among the nation's babies, but few are assisted.* ZERO TO THREE. https://stateofbabies.org/wp-content/uploads/2022/05/TANF-at-25_-Poverty-Remains-High-Among-the-Nations-Babies-But-Few-are-Assisted-6.pdf

52 U.S. Department of Health and Human Services Administration for Children & Families Office of Family Assistance. (2019). TANF Families by Amount of Cash Assistance and Number of Child Recipients: FY2018. Retrieved from: https://www.acf.hhs.gov/ofa/data/characteristics-and-financial-circumstances-tanf-recipients-fiscal-year-2018

53 Heckman, J. (2016). *There's more to gain by taking a comprehensive approach to early childhood development.* The Heckman Equation. https://heckmanequation.org/assets/2017/01/F_Heckman_CBAOnePager_120516.pdf

54 Greenberg, E., Isaacs, J. B., Derrick-Mills, T., Michie, M., & Stevens, K. (2018). *Are higher subsidy payment rates and provider-friendly payment policies associated with child care quality?* Urban Institute Center on Labor, Human Services, and Population. https://www.urban.org/sites/default/files/publication/96681/are_higher_subsidy_payment_rates_and_provider-friendly_payment_policies_associated_with_child_care_quality_1.pdf

55 Heckman, J. (2016). *There's more to gain by taking a comprehensive approach to early childhood development.* The Heckman Equation. https://heckmanequation.org/assets/2017/01/F_Heckman_CBAOnePager_120516.pdf

56 Hains, D., & Neuenswander, A. (2021). *The state of child care for babies: The need to do better for our youngest children.* ZERO TO THREE. https://www.zerotothree.org/resources/3924-the-state-of-child-care-for-babies-the-need-to-do-better-for-our-youngest-children

57 Ibid.

58 Burns, M. S., Griffin, P., & Snow, C. (Eds.). (1999). *Starting off right: A guide to promoting children's reading success. National Academy Press.* https://www.nap.edu/read/6014/chapter/1

59 Raikes, H., Pan, B. A., Luze, G. J., Tamis-LeMonda, C. S., Brooks-Gunn, J., Constantine, J., Tarullo, L. B., Raikes, H. A., & Rodriguez, E. (2006). Mother-child book reading in low-income families: Correlates and outcomes during the first three years of life. *Child Development, 77*(4), 924–953.

60 Keating, K. & Heinemeier, S. (2022). *State of babies yearbook: 2022*. ZERO TO THREE. http://stateofbabies.org/wp-content/uploads/2022/04/State-of-Babies-2022-Yearbook.pdf

61 Reach Out and Read. (2022). *Reach out and read New Jersey.* https://reachoutandread.org/affiliate/new-jersey/

62 Ibid.

63 Winston R, Chicot R. The importance of early bonding on the long-term mental health and resilience of children. London J Prim Care (Abingdon). 2016 Feb 24;8(1):12-14. doi: 10.1080/17571472.2015.1133012. PMID: 28250823; PMCID: PMC5330336.

64 Moore, K. A., Bethell, C. D., Murphey, D. A., Martin, M. C., & Beltz, M. (2017). Flourishing from the start: What is it and how can it be measured? Child Trends. https://www.childtrends.org/wp-content/uploads/2017/03/2017-16FlourishingFromTheStart-1.pdf

65 Chester, A., Schmit, S., Alker, J., & Golden, O. (2016). *Medicaid expansion promotes children's development and family success by treating maternal depression.* Georgetown University Health Policy Institute, Center for Children and Families. *https://ccf.georgetown.edu/wp-content/uploads/2016/07/Maternal-Depression-4.pdf*

66 Hops, H. (1995). Age- and gender-specific effects of parental depression: A commentary. *Developmental Psychology,* 31(3), 428-431. *https://doi.org/10.1037/0012-1649.31.3.428*

67 Bloom, L. B. (2021, January) Crime In America: Study reveals the 10 most unsafe neighborhoods. Forbes. https://www.forbes.com/sites/laurabegleybloom/2021/01/28/the-10-most-dangerous-neighborhoods-in-america-its-not-where-you-think/?sh=5c05e281341f

68 To, T., Cadarette, S. M., & Liu, Y. (2001). Biological, social, and environmental correlates of preschool development. Child Care Health & Development, 27(2), 187-200. https://doi.org/10.1046/j.1365-2214.2001.00182.x

69 Beets, M. W. & Foley, J. T. (2008). Association of father involvement and neighborhood quality with kindergarteners' physical activity: A multilevel structural equation model. American Journal of Health Promotion, 22(3), 195-203. https://doi.org/10.4278/ajhp.22.3.195

70 ZERO TO THREE. (2021). Diagnostic Classification of Mental Health and Developmental Disorders of Infancy and Early Childhood (DC:0–5). https://www.zerotothree.org/resources/1664-dc-0-5-resources.

71 The American College of Obstetricians and Gynecologists. (2021). *Reducing prenatal exposure to toxic environmental agents*. https://www.acog.org/clinical/clinical-guidance/committee-opinion/articles/2021/07/reducing-prenatal-exposure-to-toxic-environmental-agents#:~:text=Prenatal%20exposure%20to%20specific%20toxic,reproductive%20and%20developmental%20health%20outcomes

72 Eubig, P. A., Aguiar, A., & Schantz, S. L. (2010). Lead and PCBs as risk factors for attention deficit/hyperactivity disorder. *Environmental Health Perspectives*, 118(12), 1654–1667. https://doi.org/10.1289/ehp.0901852

73 Winders Davis, D., Chang, F., Burns, B., Robinson, J., & Dossett, D. (2004). Lead exposure and attention regulation in children living in poverty. *Developmental Medicine & Child Neurology*, 46(12), 825–831. https://doi.org/10.1017/s0012162204001446

74 Landrigan, P. J. & Goldman, L. R. (2011). Children's vulnerability to toxic chemicals: a challenge and opportunity to strengthen health and environmental policy. *Health Affairs*, 30(5), 842–850. https://doi.org/10.1377/hlthaff.2011.0151

75 Mitchell, B. & Franco, J. (n.d.). *HOLC "redlining" maps: the persistent structure of segregation and economic inequality*. National Community Reinvestment Coalition. https://ncrc.org/wp-content/uploads/dlm_uploads/2018/02/NCRC-Research-HOLC-10.pdf

76 Rothstein, R. (2017). *The color of law: a forgotten history of how our government segregated America*. Liveright.

77 Kravitz-Wirtz, N., Crowder, K., Hajat, A., & Sass, V. (2016). The long-term dynamics of racial/ethnic inequality in neighborhood air pollution exposure, 1990–2009. *Du Bois Review: Social Science Research on Race*, 13(2), 237–259. https://doi.org/10.1017/s1742058x16000205

78 Chakraborty, J., Collins, T. W., Grineski, S. E., Montgomery, M. C., & Hernandez, M. (2014). Comparing disproportionate exposure to acute and chronic pollution risks: a case study in Houston, Texas. *Risk Analysis*, 34(11), 2005–2020. https://doi.org/10.1111/risa.12224

79 McCormick, R. (2017). Does access to green space impact the mental well-being of children: a systematic review. *Journal of Pediatric Nursing*, 37, 3–7. https://doi.org/10.1016/j.pedn.2017.08.027

80 Rigolon, A. (2016). A complex landscape of inequity in access to urban parks: a literature review. *Landscape and Urban Planning*, 153, 160–169. https://doi.org/10.1016/j.landurbplan.2016.05.017

81 Neckerman, K. M., Lovasi, G. S., Davies, S., Purciel, M., Quinn, J., Feder, E., Raghunath, N., Wasserman, B., & Rundle, A. (2009). Disparities in urban neighborhood conditions: evidence from GIS measures and field observation in New York City. *Journal of Public Health Policy*, 30(S1), S264–S285. https://doi.org/10.1057/jphp.2008.47

82 Institute of Medicine Committee on Environmental Justice. (1999). Chapter 2: establishing a baseline. In *Toward environmental justice: research, education, and health policy needs*. National Academies Press. https://www.ncbi.nlm.nih.gov/books/NBK100856/

83 Wheeler, W. & Brown, M. J. (2013). Blood lead levels in children aged 1–5 years — United States, 1999–2010. *Morbidity and Mortality Weekly Report*, 62(13), 245–248. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4605011/

84 Hoffman, J. S., Shandas, V., & Pendleton, N. (2020). The effects of historical housing policies on resident exposure to intra-urban heat: a study of 108 US urban areas. *Climate*, 8(1), 12. https://doi.org/10.3390/cli8010012

85 U.S. Environmental Protection Agency. (n.d.). *Protecting children's health during and after natural disasters: extreme heat*. https://www.epa.gov/children/protecting-childrens-health-during-and-after-natural-disasters-extreme-heat

86 Minnesota Department of Health. (2022). *Community report: Healthy Rural and Urban Kids project*. https://www.health.state.mn.us/communities/environment/biomonitoring/docs/en_hrukcommreport.pdf

87 Dereumeaux, C., Fillol, C., Quenel, P., & Denys, S. (2020). Pesticide exposures for residents living close to agricultural lands: a review. *Environment International*, 134, 105210. https://doi.org/10.1016/j.envint.2019.105210

88 Liu, J. & Schelar, E. (2012). Pesticide exposure and child neurodevelopment: summary and implications. *Workplace Health & Safety*, 60(5), 235–242. https://journals.sagepub.com/doi/epdf/10.1177/216507991206000507

89 Von Ehrenstein, O. S., Ling, C., Cui, X., Cockburn, M., Park, A. S., Yu, F., Wu, J., & Ritz, B. (2019). Prenatal and infant exposure to ambient pesticides and autism spectrum disorder in children: population based case-control study. *BMJ*, 364, l962. https://doi.org/10.1136/bmj.l962

90 Liu, J. & Schelar, E. (2012). Pesticide exposure and child neurodevelopment: summary and implications. *Workplace Health & Safety*, 60(5), 235–242. https://journals.sagepub.com/doi/epdf/10.1177/216507991206000507

91 Von Ehrenstein, O. S., Ling, C., Cui, X., Cockburn, M., Park, A. S., Yu, F., Wu, J., & Ritz, B. (2019). Prenatal and infant exposure to ambient pesticides and autism spectrum disorder in children: population based case-control study. *BMJ*, 364, l962. https://doi.org/10.1136/bmj.l962

92 *Indian Removal Act of 1830*, 25 U.S.C. §174. 1830)

93 Sasa, S. M., & Yellow Horse, A. J. (2022). Just data representation for Native Hawaiians and Pacific Islanders: A critical review of systemic Indigenous erasure in census and recommendations for psychologists. *American journal of community psychology*, *69*(3-4), 343-354.

94 Case, D. S., and D. A. Voluck. 2012. *Alaska Natives and American laws* (3rd ed.). University of Alaska Press, Fairbanks, U.S.A.

95 Farrell, J., Burow, P. B., McConnell, K., Bayham, J., Whyte, K., & Koss, G. (2021). Effects of land dispossession and forced migration on Indigenous peoples in North America. *Science*, 374(6567). https://doi.org/10.1126/science.abe4943

96 Bronen, R. (2013). Climate-Induced Displacement of Alaska Native Communities. https://research.fit.edu/media/site-specific/researchfitedu/coast-climate-adaptation-library/united-states/west-coast-amp-hawaix27i/alaska/Bronen.--2013.--CC-Displacement-of-Native-Communities.pdf

97 Trainor, S. F., Stuart Chapin III, F., Huntington, H. P., Natcher, D. C., & Kofinas, G. (2007). Arctic climate impacts: environmental injustice in Canada and the United States. *Local Environment*, *12*(6), 627-643.

98 Keener, V. W., Marra, J. J., Finucane, M. L., Spooner, D., Smith, M. H., & Assessment, P. I. R. C. (2012). *Climate change and Pacific islands: indicators and impacts: report for the 2012 Pacific Islands Regional Climate Assessment (PIRCA)*. Washington, DC: Island Press.

99 U.S. General Accounting Office. (2003). Alaska Native Villages: Most Are Affected by Flooding and Erosion, but Few Qualify for Federal Assistance. https://www.gao.gov/assets/gao-04-142.pdf

100 Lewis, J., Hoover, J., & MacKenzie, D. (2017). Mining and environmental health disparities in Native American communities. *Current Environmental Health Reports*, 4(2), 130–141. https://doi.org/10.1007/s40572-017-0140-5

101 Hooks, G. and C.L. Smith. 2004. The treadmill of destruction: National sacrifice areas and Native Americans. *American Sociological Review* 69:558-575.

102 Whyte, K.P. 2017. The Dakota Access Pipeline, Environmental Injustice, and U.S. Colonialism. Red Ink: An International Journal of Indigenous Literature, Arts, & Humanities 19(1).

103 Spencer, M. S., Fentress, T., Touch, A., & Hernandez, J. (2020). Environmental justice, Indigenous knowledge systems, and Native Hawaiians and other Pacific islanders. *Human Biology*, *92*(1), 45-57.

104 Edwards, C. 2012. Indian lands, Indian subsidies, and the Bureau of Indian Affairs. *Downsizing-Government.org, Cato Institute*. \https://www.downsizinggovernment.org/sites/downsizing-government.org/files/interior-indian-lands-indian-subsidies.pdf

105 Lewis, J., Hoover, J., & MacKenzie, D. (2017). Mining and environmental health disparities in Native American communities. *Current Environmental Health Reports*, 4(2), 130–141. https://doi.org/10.1007/s40572-017-0140-5

106 Walker, J. L., Bradley, J. L., & Humphrey Sr, T. J. (2002). A closer look at environmental injustice in Indian Country. *Seattle J. Soc. Just.*, *1*, 379.

107 Hoover, E., Cook, K., Plain, R., Sanchez, K., Waghiyi, V., Miller, P., Dufault, R., Sislin, C., & Carpenter, D. O. (2012). Indigenous peoples of North America: environmental exposures and reproductive justice. *Environmental Health Perspectives*, 120(12), 1645–1649. https://doi.org/10.1289/ehp.1205422

108 Center for Health Equity. (2020). *Eliminating Health Disparities Initiative: fiscal years 2019 and 2020*. Report to the Minnesota Legislature 2020. Minnesota Department of Health. https://www.health.state.mn.us/communities/equity/reports/legislativerpt2020.pdf

109 Center for Health Equity. (2020). *Cultivating a health equity ecosystem: lessons learned from the Eliminating Health Disparities Initiative*. Minnesota Department of Health. https://www.health.state.mn.us/communities/equity/ehdi/reports/impactreport.pdf

110 Minnesota Department of Health. (2021). *Housing*.

111 Ibid.

112 Ibid

113 Xiong, S. (2017). *Key Housing Issues Facing Immigrant Communities in the Twin Cities: Interviews with leaders from the Hmong, Latino and Somali communities*. University of Minnesota School of Public Health.

114 Minnesota Department of Health. (n.d.) *Health equity in childhood asthma and lead exposure*. Collected by the Minnesota Tracking Program. St. Paul, Minnesota: Accessed from MN Public Health Data Access portal. https://data.web.health.state.mn.us/equity_lead Retrieved September 2022.

115 Thøgersen, J. (2021). *Consumer behavior and climate change: consumers need considerable assistance.* Current opinion in behavioral sciences, ScienceDirect, 42:9–14. https://doi.org/10.1016/j.cobeha.2021.02.008

116 National Academies of Sciences, Engineering, and Medicine. (2020). *Leading Health Indicators 2030: advancing health, equity, and well-being*. Washington, DC: The National Academies Press. https://doi.org/10.17226/25682

117 Coburn, K., Keating, K., & Jennings-Shaffer, J. (2021). *Addressing bias and advancing equity in state policy*. ZERO TO THREE. https://www.zerotothree.org/resources/4198-addressing-bias-and-advancing-equity-in-state-policy

118 Venkataramani, M., Pollack, C. E., & Roberts, E. T. (2017). Spillover effects of adult Medicaid expansions on children's use of preventive services. *Pediatrics*, 140(6), e20170953. https://doi.org/10.1542/peds.2017-0953

119 Bhatt, C. B., & Beck-Sagué, C. M. (2018). Medicaid expansion and infant mortality in the United States. *American Journal of Public Health*, 108(4), 565–567. https://doi.org/10.2105/ajph.2017.304218

120 Brevoort, K., Grodzicki, D., & Hackmann, M. B. (2017). *Medicaid and financial health*. [Working paper]. National Bureau of Economic Research. https://www.nber.org/system/files/working_papers/w24002/w24002.pdf

121 Abramowitz, J. (2018). The effect of ACA state Medicaid expansions on medical out-of-pocket expenditures. *Medical Care Research and Review*, 77(1), 19–33. https://doi.org/10.1177/1077558718768895

122 Ranji, U., Gomez, I., & Salganicoff, A. (2019). *Expanding postpartum Medicaid coverage*. [Issue report]. Henry J. Kaiser Family Foundation. https://firstfocus.org/wp-content/uploads/2019/11/Issue-Report-Expanding-Postpartum-Medicaid-Coverage.pdf

123 Kaiser Family Foundation (2022). Medicaid Postpartum Coverage Extension Tracker. Medicaid Postpartum Coverage Extension Tracker | KFF

124 Tax Credits for Workers and Families (n.d.). *State tax credits*. http://www.taxcreditsforworkerandfamilies.org/state-tax-credits/

125 Marr, C., Huang, C. C., Sherman, A., & Debot, B. (2015). *EITC and Child Tax Credit promote work, reduce poverty, and support children's development, research finds*. Center on Budget and Policy Priorities. https://www.cbpp.org/research/federal-tax/eitc-and-child-tax-credit-promote-work-reduce-poverty-and-support-childrens

126 Ibid.

127 Ibid.

128 Keating, K. & Heinemeier, S. (2022). *State of babies yearbook: 2022*. ZERO TO THREE. http://stateofbabies.org/wp-content/uploads/2022/04/State-of-Babies-2022-Yearbook.pdf

129 Acs, G., Giannarelli, L., Werner, K., & Biu, O. (2022). *Exploring the effects of a $15 an hour federal minimum wage on poverty, earnings, and net family resources.* Urban Institute. Exploring the Effects of a $15 an Hour Federal Minimum Wage on Poverty, Earnings, and Net Family Resources - RWJF

130 National Conference of State Legislatures. (2022). *State minimum wages*. https://www.ncsl.org/research/labor-and-employment/state-minimum-wage-chart.aspx

131 Shrivastava, A. & Thompson, G. A. (2022). *Cash assistance should reach millions more families to lessen hardship*. [Policy report]. Center on Budget and Policy Priorities. https://www.cbpp.org/research/family-income-support/cash-assistance-should-reach-millions-more-families-to-lessen

132 Center on Budget and Policy Priorities. (2022). *Policy basics: Tribal TANF*. https://www.cbpp.org/sites/default/files/policybasics-tribaltanf.pdf

133 Ibid.

134 Schulte, B., Durana, A., Stout, B., & Moyer, J. (2017). *Paid family leave: How much time is enough?* New America. https://www.newamerica.org/better-life-lab/reports/paid-family-leave-how-much-time-enough/

135 Clinton, J., Feller, A., & Williams, R. (2016). The importance of infant mental health. *Paediatrics & Child Health*, 21(5), 239–241. https://doi.org/10.1093/pch/21.5.239

136 Fulton, B., Cole P., and Ullrich, R. (2017). *Housing assistance: A critical support for infants, toddlers, and families.* ZERO TO THREE and the Center for Law and Social Policy.

137 Acosta, A. (2021). *Investing in housing vouchers critical to protecting children from hardship, building more equitable future.* Center on Budget and Policy Priorities. Investing in Housing Vouchers Critical to Protecting Children From Hardship, Building More Equitable Future | Center on Budget and Policy Priorities (cbpp.org)

138 Chien, N. (2021). *Factsheet: Estimates of child care eligibility and receipt for Fiscal Year 2018*. Office of the Assistant Secretary for Planning & Evaluation. https://aspe.hhs.gov/reports/estimates-child-care-eligibility-receipt-fy-2018

139 Kashen, J. and Malik, R. (2022). *More than three million child care spots saved by American Rescue Plan funding*. The Century Foundation. https://tcf.org/content/commentary/three-million-child-care-spots-saved-american-rescue-plan-funding/

140 Social Interventions Research and Evaluation Network. (2020, September 11). *The Gravity Project receives grant to standardize how health care organizations collect data on housing and other social factors*. [Press release]. University of California San Francisco. https://sirenetwork.ucsf.edu/TheGravityProject

141 Ibid.

142 Office of Disease Prevention and Health Promotion. (n.d.). *Social determinants of health*. U.S. Department of Health and Human Services. https://health.gov/healthypeople/priority-areas/social-determinants-health

Acknowledgments

This report would not have been possible without the generous support of the Conrad N. Hilton Foundation. First and foremost, the authors extend our gratitude to the Hilton Foundation for providing us the opportunity to develop this report.

Writing a report of this nature required extensive team effort. We are grateful to the research team at Child Trends for their thought partnership, coordination, writing, review, and support throughout the development of the report, including Sarah Daily, Emily Maxfield, Gabriel Pina, Elizabeth Jordan, Heather Gordon, Maria Ramos, Opiaah Jeffers, Andra Wilkinson, Porsche Boddicker-Young, and Emilia Sotolongo.

We are especially grateful for the guidance, thoughtful feedback, and insight of key leaders at ZERO TO THREE, including Miriam Calderon, Patricia Cole, Jim Bialick, Justine Davenport, Jamie Colvard, and Jennifer Jennings-Shaffer. Special appreciation is extended to our Federal Policy Team colleagues, Daniel Hains and Mollyrose Schaffner for their informed contributions to the federal policies addressed in the report.

Many thanks to our ZERO TO THREE communications team—especially Morgan Brill, Ricky Webster, Sydney Stevens, and Lauren Donovan, whose coordination and expertise helped to ensure that this was a polished product and was disseminated widely. Finally, our appreciation is extended to Jonathan Wolfe for initial copyediting and Marie Horn for the artful report design.

Suggested Citation: Keating, K., Ekyalongo, Y., Sapp, A., Heinemeier, S., and Cole, P. (2022). *Using the State of Babies Yearbook to Illuminate the Social Determinants of Health for Infants and Toddlers*. Washington, DC: ZERO TO THREE and Bethesda, MD: Child Trends.