

Marking Children's Developmental Milestones: Findings from a Baseline Survey of Mississippi

The earliest stages of life deserve our state's attention.

The earliest stages of life matter much more than people once believed. The architecture of the brain is built from the bottom up, with intense construction going on from infancy through age eight. In the early years, children develop many different types of important skills, laying the foundation for later learning and abilities [1]. In the first months of life, babies learn to focus their vision and move their muscles intentionally, setting them up to explore the world around them as they grow. As a toddler learns to calm down after being upset, they are developing the abilities that will let them manage stronger emotions or bigger problems when they are older. When a preschooler learns to share and play with others, they are laying down the foundation of having good relationships throughout life.

These skills are essential to the child's future and also to the future of our state. When we do what it takes for Mississippi's children to thrive, we equip tomorrow's neighbors, workforce, and leaders to do what it takes for Mississippi to thrive.

The things young children typically do at certain ages are called *developmental milestones*. It is important for adults to pay attention to children's progress toward these milestones and notice when children do not reach the milestones at the expected time. If there is a delay or other concern, it is usually easier and more effective to take action right away, rather than waiting. The American Academy of Pediatrics recommends that health care providers monitor development at all wellness visits and complete formal checks on developmental milestones at 9 months, 18 months, and 24 or 30 months old [2].

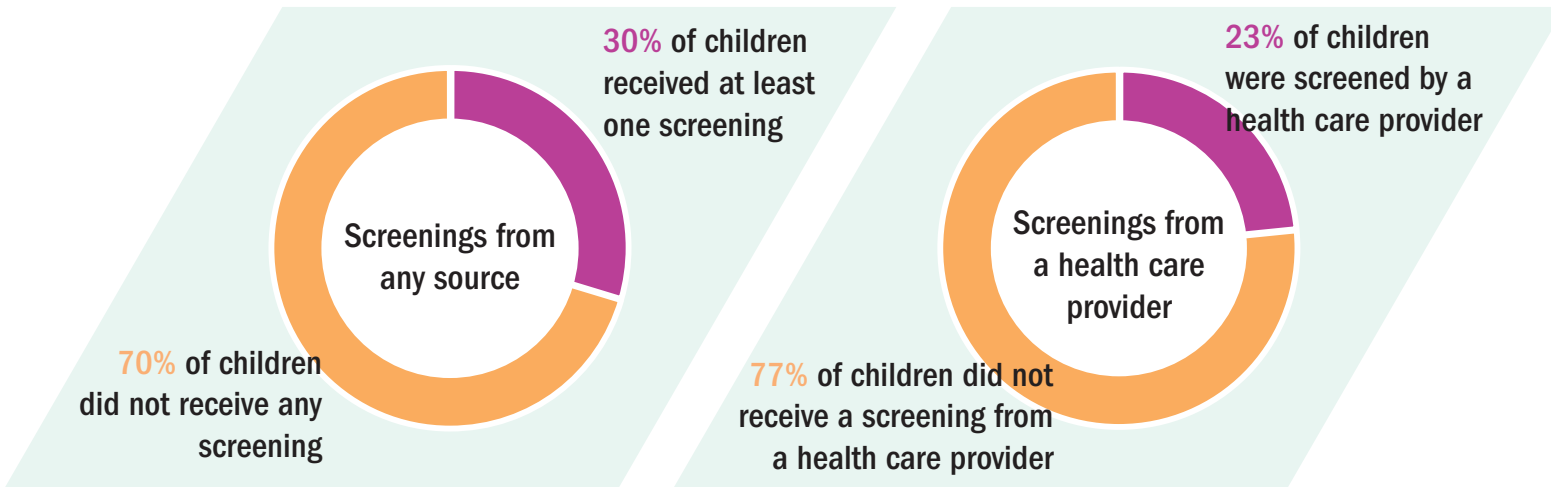


Mississippi is taking an innovative approach to marking more milestones.

The Child Health and Development Project (CHDP) is focused on making sure that every child in Mississippi benefits from a professional check on their overall development. CHDP is a partnership between The University of Mississippi Medical Center (UMMC)'s Children's of Mississippi, Mississippi State University's Social Science Research Center, and the Health Resources Services Administration (HRSA). Thanks to funding from HRSA, a comprehensive survey was conducted to examine how many young children in Mississippi received an assessment of their developmental progress. This brief summarizes key results from the 2018 Mississippi Child Health and Development Survey (MCHDS).

Most children in Mississippi have not received a professional check on their development.

7 out of 10 young Mississippi children have not been screened for developmental milestones



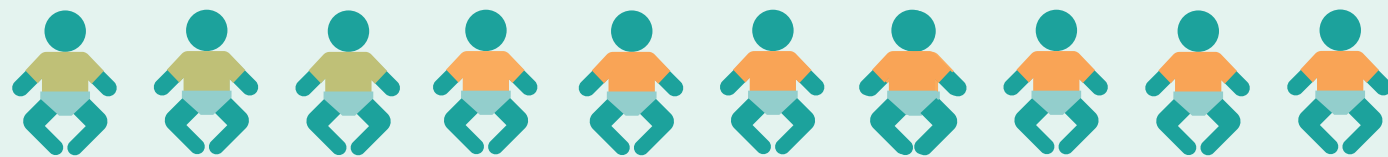
Source: Mississippi Child Health and Development Survey, 2018

Professionals with expertise in child development, like pediatricians, nurses, or child care providers, can start a conversation with families about how children are developing. This works best when professionals ask parents a structured set of questions that check on children’s progress toward different types of developmental milestones. For example, it’s important to know whether one year olds have said their first word and if two year olds have started to use two-word phrases. These kinds of discussion-based questionnaires are known as developmental screenings. The American Academy of Pediatrics guidelines indicate that children should receive developmental screenings regularly throughout infancy and early childhood [2].

Our survey revealed that, in Mississippi, 77% of children between 9 months and 6 years of age have not received a recent developmental screening from a health care provider. Additionally, only 30% of children between 9 months and 6 years of age in Mississippi were reported to have received a developmental screening from any source, including health care, child care, and all other screening providers.

Children develop rapidly, and in many ways, from 9 months to 6 years. Only 3 in 10 children in Mississippi received a formal screening for developmental health in this period.

Findings from the 2018 Mississippi Child Health and Development Survey indicate that only



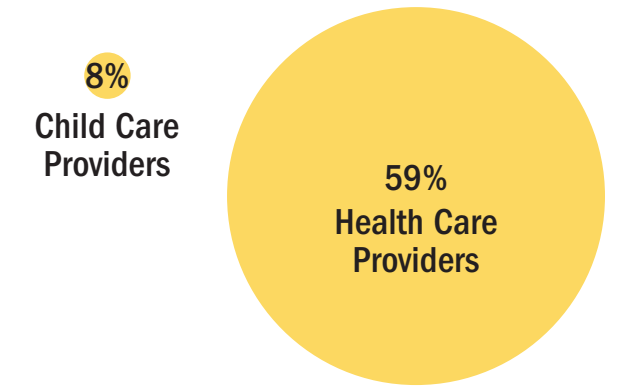
3 out of every **10** children under 6 years of age have received a developmental health screening

Families are most likely to get information about development from health care providers.

When professionals talk with families about overall child development, parents can learn more about what young children need to thrive. Including developmental screenings in health care visits and other existing programs is a way to boost strong child development on a wide scale.

In order to measure developmental health promotion activities, families were asked to specify all sources from which they received information about their child’s health and development, including information about developmental milestones. The majority of parents (57%) reported getting information about developmental milestones from health care providers, while only a very small share of parents (8%) reported receiving information about these milestones from their child care providers.

Proportion of families who get information about developmental milestones from:



Source: Mississippi Child Health and Development Survey, 2018

Families report getting some important types of developmental information but not others.

For most parents, pediatricians and other health providers are trusted sources of information about child health and development. This trust is an important resource that our state can deploy to promote wider understanding of the many skills and abilities that are developing in the early years and the kinds of support and interaction that children need.

The Mississippi Child Health and Development Survey asked parents to specify what types of developmental health information they received from their healthcare providers in the past 12 months. A slight majority of families (51%) reported getting information from their health care providers about daily interactions and relationships with their children, which is in keeping with national research suggesting that parents tend to ask their pediatricians about typical early childhood concerns like sleeping, toilet training, and tantrums. Yet the survey also showed that most families are not getting information about other critical aspects of child development, such as how talking, reading, and singing with children is important to their overall language learning. Each of these measures and their corresponding response frequencies are illustrated in the table below.

During the past 12 months, have you received advice from a health care provider around...	Yes
...Daily interactions or relationship with your child?	51%
...Daily reading, talking, or singing to your child?	43%
...Community resources to meet your families’ needs?	43%
...Helpful community resources to support your child’s learning and development?	41%
...Screening your child for any development, communication, or behavioral concerns?	34%

Source: Mississippi Child Health and Development Survey, 2018

We are missing important opportunities by not asking about developmental milestones.

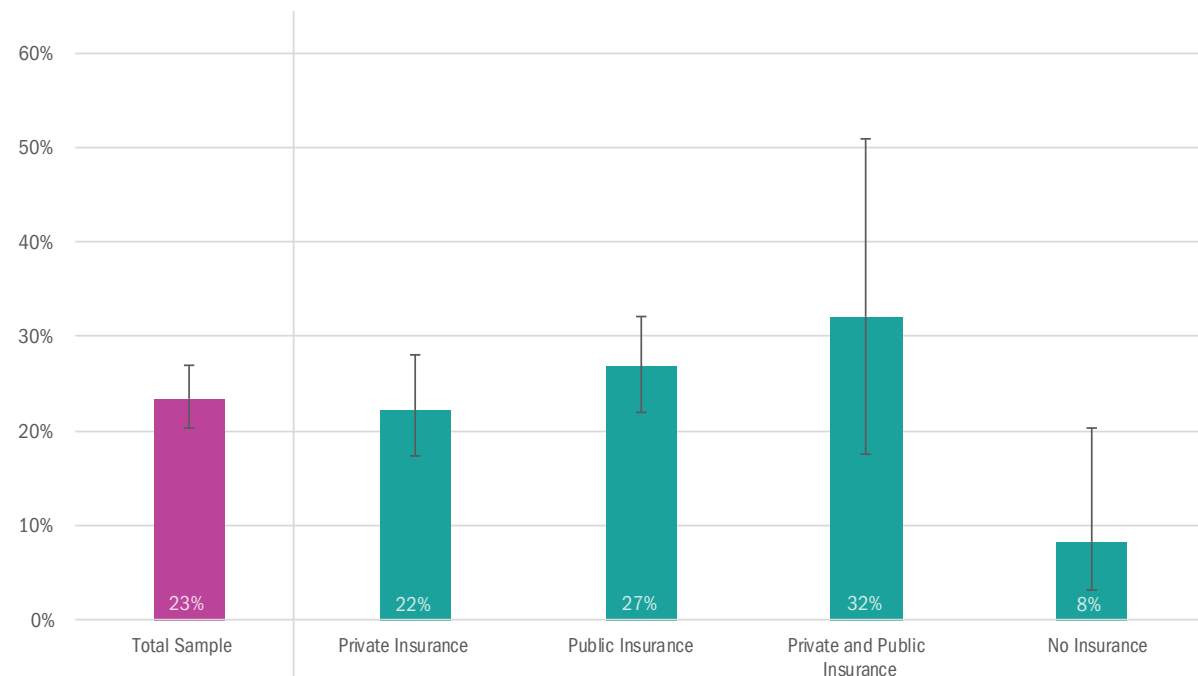
If a child isn't reaching a milestone when expected, this is known as a **developmental delay**. Increasing rates of developmental screening can lead to earlier diagnosis and more effective treatment of any delays. Because young children rapidly develop many interrelated skills, it's important to address any delays right away. Many delays can be addressed through simple interventions, especially if they are spotted early. On the other hand, if issues aren't spotted early, problems can become harder – and more expensive – to address.

1 out of every **20** children under age 6 in Mississippi has been diagnosed with a developmental delay.

Rates of developmental screening vary by health insurance type.

Most children in Mississippi (95%) are covered by some type of health insurance plan, which means that they generally have access to well-child checkups and other health care [3]. About 48% of these children are enrolled in a public insurance program (mostly Medicaid and/or the Children's Health Insurance Program) [3]. These public programs offer an opportunity for the state to encourage or even require more developmental screenings as a way to improve important developmental outcomes. Nevertheless, the survey showed that only 27% of children covered by public insurance received a recent developmental screening from their health care providers, and the percentage of children with private insurance who received a screening was even lower at 22%.

Mississippi Rate of Developmental Screening from Health Care Provider by Insurance Type



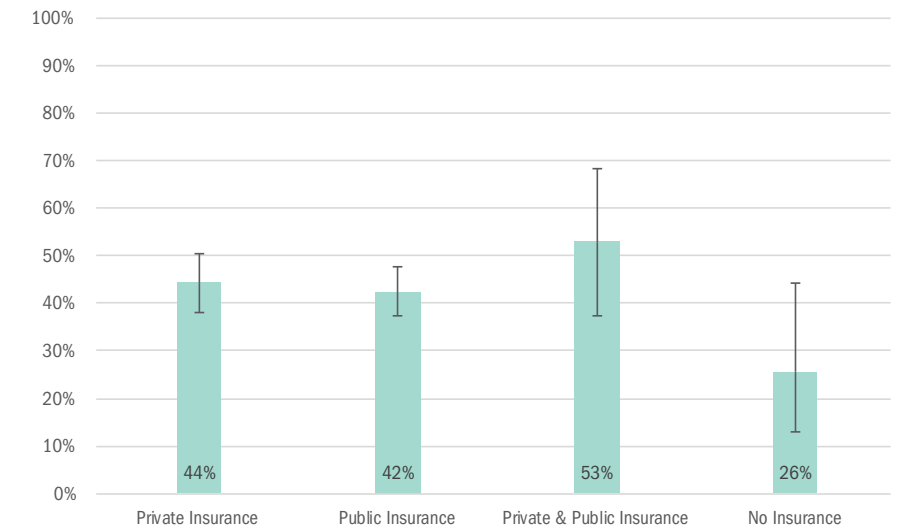
Source: Mississippi Child Health and Development Survey, 2018

Conversations about developmental concerns also vary by health insurance type.

Parents and caregivers sometimes report that their child's health care provider had a conversation with them about their child's development. These informal conversations, called developmental surveillance, are not as thorough as a developmental screening with a formal screening tool, as recommended by the American Academy of Pediatrics; however, they do mark some level of developmental monitoring.

Differences in developmental surveillance were found depending on the type of health insurance a child had. While we saw in the last graph that children who had public insurance were more likely, according to their parents and caregivers, to have received a formal developmental screening from their health care provider than children with private insurance, the opposite is true for developmental surveillance. Parents of children with private insurance were slightly more likely to report that their doctor had this type of conversation with them than parents of children with public insurance.

Developmental Surveillance Rates by Insurance Type



Source: Mississippi Child Health and Development Survey, 2018

Increasing screening is necessary – but won't be sufficient.

As Mississippi takes steps to increase the number of children who have their development formally checked by a professional, the state must also consider how to ensure that appropriate services are available to address any issues that are identified. Because young children are developing so rapidly, and because each aspect of development depends on the others, it is important for follow-up to happen quickly if a concern about development is spotted.

Put another way: screening is only one aspect of making sure that children meet developmental milestones. Other parts of a complete, effective system for supporting child development include:

Referral systems. While a child's health care provider or child care provider may be able to address some developmental concerns, for others, the provider may think it best for the family to see another type of professional.

Intervention systems. Referrals only work if there are providers who have the right expertise and can see the child in a timely manner.

Care coordination systems. Some developmental issues involve multiple health care providers. In these situations, it is important to have care coordination to support intentional communication and cooperation across providers. Care coordination helps everyone involved – the primary doctor, specialists, and the family – to work together more effectively and ensure that the child gets the best possible outcome.

Medical "homes." The "medical home" approach to primary care, which gives families access to a consistent primary health care provider who coordinates their child's care, is a promising way to achieve quality health care, reduced health care costs, and a better experience for patients.

Policy Recommendations

Increase developmental screening rates and improve children's developmental outcomes by:

- Training nursing students, medical students, pediatricians, family practitioners, and pediatric and family nurse practitioners in early childhood development, ensuring they know how and when to provide developmental and behavioral screenings.
- Training allied health professionals such as speech pathologists, occupational therapists, social workers, and psychologists, ensuring they are equipped to provide comprehensive early intervention supports and services for families.
- Making it easier for health care providers to educate families about child development, conduct developmental screenings, and connect families to appropriate services by:
 - increasing Medicaid managed care organizations' accountability for ensuring children receive developmental screenings at Early and Periodic Screening, Diagnostic and Treatment (EPSDT) wellness checks;
 - expanding the use of telehealth services to link primary care providers to developmental health specialists;
 - continuing to allow for reimbursement for home telehealth developmental and behavioral services in order to increase families' access to supports; and
 - increasing support from Medicaid and other insurance providers for statewide pediatric care coordination services.

Enhance the role of caregivers in promoting children's developmental health by:

- Requiring early childhood care providers to continue to learn about early childhood development and equipping child care centers with referral resources.
- Supporting parents in:
 - understanding the importance of children's developmental and behavioral health;
 - being familiar with developmental milestones; and
 - requesting that primary care providers conduct formal developmental screenings.

Ensure that children with developmental health needs have access to high-quality intervention services by:

- Incentivizing new and renewed contracts between service providers and the Mississippi State Department of Health First Steps/Early Intervention program (IDEA-C) by:
 - increasing provider contract limits and service reimbursement rates;
 - reducing administrative burdens through a streamlined renewal process for existing providers and/or extending provider contracts beyond one year; and
 - recruiting and expediting contracts with providers trained in Mississippi through workforce initiatives between First Steps and Mississippi institutions of higher learning.
- Instituting a more efficient system for the sharing of relevant health information between early interventionists and the child's medical home to reduce service duplication and improve care quality.
- Implementing the option to extend IDEA-C services to infants and toddlers considered at-risk of experiencing a substantial developmental delay if early intervention services are not provided to them.
- Increasing Mississippi's funding of IDEA-C programs to meet the needs of all children enrolled in the program.

Survey Sample and Methods

The Mississippi Child Health and Development Survey (MCHDS) is a cross-sectional dual-frame telephone survey of parents or other caregivers in households with a child ages 0-71 months old (N = 1,016 children). The 2018 MCHDS is a representative state-wide survey modeled after the 2016 National Survey of Child Health (NSCH). Adult respondents (n = 10, 0.9%) provided information for a focal child ages 0-71 months old residing in each household. The purpose of the MCHDS is to provide baseline data on the prevalence of developmental screening, surveillance, and promotion in Mississippi. The 2018 MCHDS is one component of a larger project funded through a grant to the University of Mississippi Medical Center and Mississippi State University from the U.S. Health Resources and Services Administration.

The 2018 MCHDS was modeled, in part, after the 2016 National Survey of Child Health (NSCH) and provides representative information about children ages 0-71 months old in Mississippi. Parents (n = 774, 76.2%), other family members (n = 232, 22.8%), or other knowledgeable adult proxy respondents (n = 10, 0.9%) provided information about developmental health, developmental screening receipt, health care utilization, and selected mental and physical health conditions for a focal child between the ages 0-71 months old. The survey also includes information about key behavioral, psychosocial, and socioeconomic risk factors, which have been associated with adverse developmental health outcomes among young children in prior research.

Respondents in the 2018 MCHDS were drawn from a dual-frame (cell phone and landline) random digit dial sample of Mississippi residents. As part of the screening process, adult respondents were asked to list names and ages for all usual residents within a sampled household. Adult respondents in households with more than one age-eligible child were instructed to provide information about a single age-eligible child (focal child) selected randomly by computer from the aforementioned list of household members.

The Survey Research Laboratory (SRL) at the MSU Social Science Research Center (SSRC) conducted interviews between April and August 2018. Respondents who completed the survey were given a \$10 gift card to a national retailer to incentivize participation. The survey was approved by the Institutional Review Board (IRB) at both Mississippi State University and the University of Mississippi Medical Center. Additional information about the survey design and implementation is available upon request.

References

- 1: National Scientific Council on the Developing Child (2007). The timing and quality of early experiences combine to shape brain architecture: Working paper no.5. Retrieved from <https://developingchild.harvard.edu/resourcecategory/reports-and-working-papers/>
- 2: American Academy of Pediatrics. (2017). Recommendations for preventive pediatric health care. Retrieved from: https://www.aap.org/en-us/Documents/periodicity_schedule.pdf
- 3: Center for Mississippi Health Policy (2018). A Profile for Health Coverage of Mississippi Children. <https://mshealthpolicy.com/wp-content/uploads/2018/08/Child-Health-Coverage-Chartbook-Final-7-9-18.pdf>
- 4: Child and Adolescent Health Measurement Initiative, Data Resource Center for Child and Adolescent Health. (2018). 2016 National Survey of Children's Health (NSCH) [(SPSS) Indicator Data Set]. Health Resources and Services Administration, Maternal and Child Health Bureau in collaboration with the U.S. Census Bureau. Retrieved [1/31/2019] from www.childhealthdata.org.



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The Child Health and Development Project: Mississippi Thrive!, funded by the Health Resources Services Administration (HRSA), is a project of the University of Mississippi Medical Center (UMMC) and the Social Science Research Center (SSRC) of Mississippi State University (MSU). Our goal is to improve the developmental health of children ages 0-5 in Mississippi. For more information, visit us at www.MississippiThrive.com

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