



PEDIATRIC CARE • SUPPORTING • PARENTING
A Program of ZERO TO THREE

Child Growth and Development: HealthySteps Theory of Change

HealthySteps, a program of ZERO TO THREE, promotes improved outcomes for young children and families, in part by identifying and addressing concerns related to children's development, including their physical, cognitive, language, and social-emotional progress. This document describes the prevalence (i.e., how common it is) and effects of child growth and development concerns and how support to families can yield positive changes in a child's first three years and beyond. It includes a theory of change that illustrates the connection between HealthySteps services for Tier 3 families^a and potential improvements in child growth and development.

Child Growth and Development at a Glance

There are many factors that impact a child's growth and development, including relationships with caregivers, environmental stressors, and systemic racism. Safe, stable, and nurturing relationships improve children's social-emotional, cognitive, and language development.¹ They are also associated with long-term indicators of health and well-being.² Parenting practices and activities that support healthy growth and physical development—including exclusive breastfeeding, responsiveness to a child's cues (e.g., hunger), provision of healthy foods, and opportunities for physical activity—are linked with healthier growth trajectories in childhood.³ Conversely, environmental stressors such as poverty and systemic racism can negatively affect child development.⁴

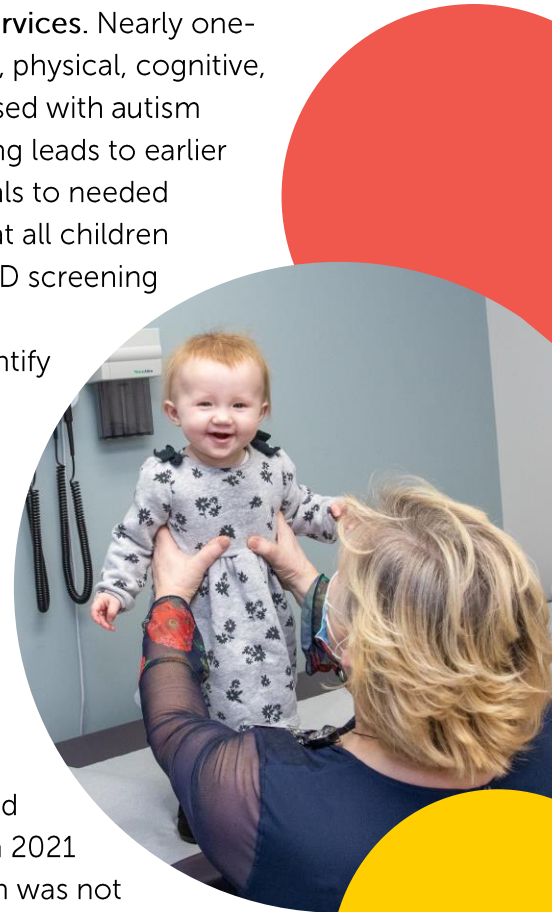


^a This document focuses on how HealthySteps can potentially influence child growth and development for Tier 3 families; it does not address the potential influence on Tier 1 and Tier 2 families.

A child's growth and development can affect their health and well-being, both in the short term and later in life. Healthy growth and development in early childhood are linked to positive outcomes throughout a person's life, including physical and emotional health, overall well-being, economic productivity, school readiness, and academic achievement.⁵⁻⁹ Adverse childhood experiences that impede healthy growth and development can lead to decreased health and well-being, reduced educational achievement, and unhealthy social relationships.¹⁰⁻¹³

Screening rates for child developmental concerns remain low, despite the prevalence of such concerns and known benefits of early identification and services. Nearly one-quarter of children ages 3-17 have one or more mental, emotional, physical, cognitive, or behavioral problems,¹⁴ and 3% of children ages 3-17 are diagnosed with autism spectrum disorder (ASD).¹⁵ Research shows that increased screening leads to earlier identification of child development concerns and increased referrals to needed services.^{16,17} The American Academy of Pediatrics recommends that all children receive developmental screening at ages 9, 18, and 30 months; ASD screening at ages 18 and 24 months; and family-centered behavioral/social/emotional screening at all well-child visits to identify developmental concerns and connect children with critical services.¹⁸ Despite these recommendations, only 37% of children ages 9-35 months are screened for developmental concerns, including those related to physical, language, and social-emotional development.¹⁹ Screening is a critical first step to accessing high-quality early intervention services, which can improve child outcomes and are more effective when delivered earlier in life.^{20,21}

Supporting child growth and development is a health equity issue. There are racial and ethnic disparities in the identification and receipt of services for child development concerns. For example, a 2021 study found that children of color or those in homes where English was not the primary language were less likely than White children to receive a diagnosis for developmental delays and/or to receive developmental services.²² Racial and ethnic disparities exist for ASD as well. A recent study found that children with ASD who are Hispanic or Black were less likely than White children to receive their first ASD evaluation by age 36 months.²³ Furthermore, structural racism is a root cause of material hardships such as food insecurity, which negatively influences child growth and development.^{24,25}



How HealthySteps Can Help

HealthySteps sites are well positioned to help families support child growth and development. HealthySteps team members provide universal support to families, including monitoring children’s weight and height, screening at least annually for child development and social-emotional development, and screening for ASD at least once by the 24-month well-child visit. Site staff also screen for family needs (e.g., maternal depression, food insecurity) to help identify families who may benefit from the extra support of a HealthySteps Specialist. The HealthySteps Specialist is also available to all families via the Family Support Line to answer questions about child development, behavior, nutrition, parenting, and breastfeeding.

HealthySteps team members also provide tailored supports related to healthy child growth and development to families enrolled in Tier 3 services. These supports include:



Ongoing, Preventive Team-Based Well-Child Visits—During visits, the HealthySteps Specialist establishes a rapport with families, positioning them to discuss screening results and monitor family concerns over time. Additionally, the HealthySteps Specialist can follow up with families on information the medical providers shared about their child’s physical, cognitive, language, and social-emotional development, helping to ensure the caregiver’s understanding.



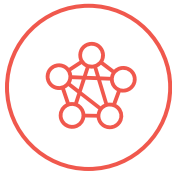
Child Development & Behavior Consults—The HealthySteps Specialist can offer family consults outside of well-child visits to discuss a variety of developmental and/or child behavior issues and steps caregivers can take to address the concerns.



Positive Parenting Guidance & Information—The HealthySteps Specialist can provide information and anticipatory guidance (e.g., What’s Up Newsletters) on topics related to child growth and development. Topics can be specific to social-emotional development (e.g., temperament, limit setting, difficult behaviors), cognitive and language development (e.g., science and math activities, shared reading time, early intervention services), and physical growth (e.g., benefits of breastfeeding, responsive feeding, healthy eating).



Early Learning Resources—The HealthySteps team can provide families with early learning handouts on topics related to cognitive, language, and social-emotional development (e.g., problem-solving, physical skills, social-emotional competence). These handouts follow the well-child visit schedule and suggest low- and no-cost activities for caregivers to stimulate their child’s development.



Care Coordination & Systems Navigation—The HealthySteps Specialist can organize and facilitate the coordinated delivery of services across multiple providers. This may include developmental services (e.g., early intervention, child mental health services), services for maternal depression,^b and nutritional supports and services (e.g., lactation consultants, WIC). The HealthySteps Specialist can also follow up with families on the receipt of services and offer support if referral barriers occur.

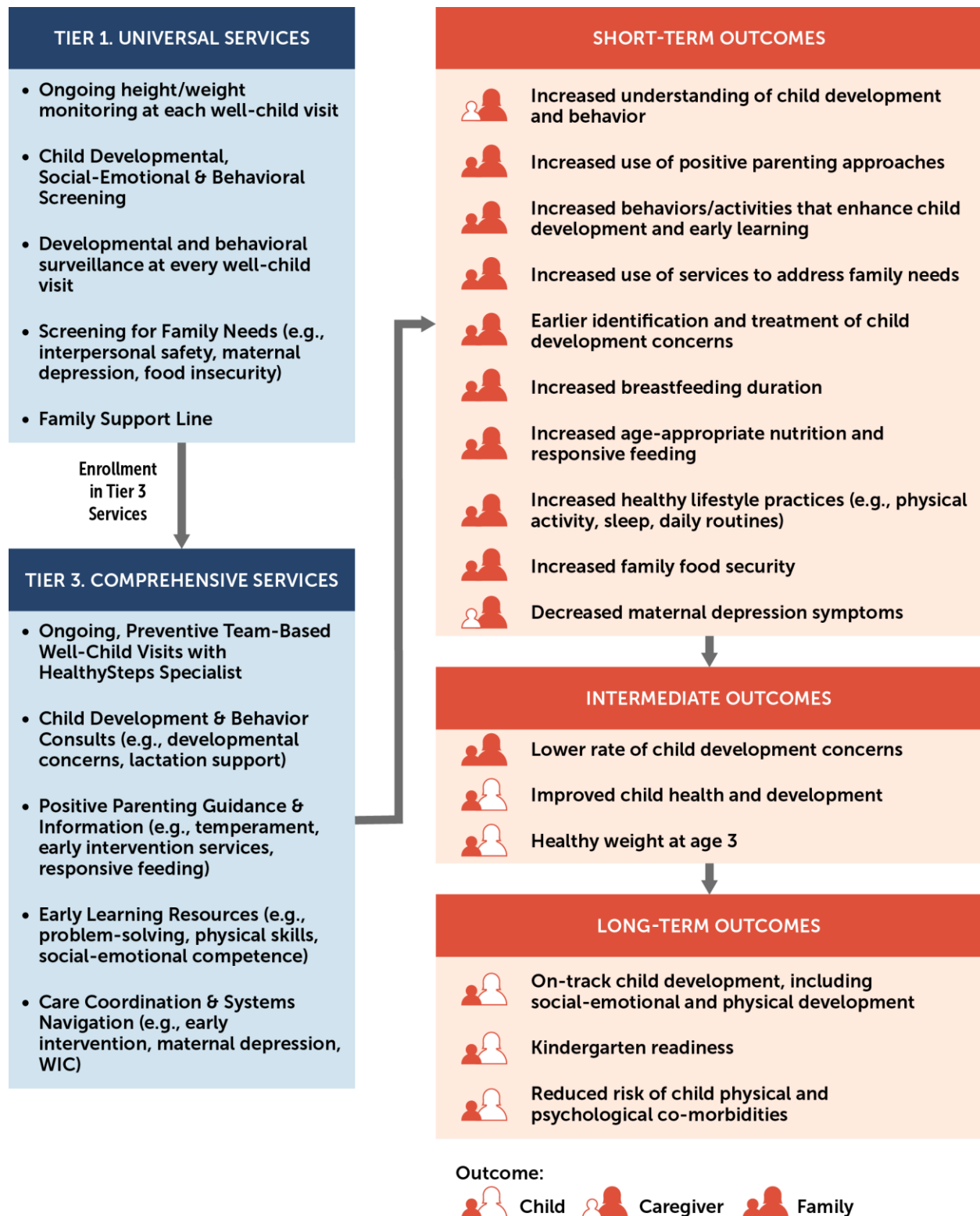
Theory of Change

The theory of change exhibit summarizes how HealthySteps can help support child growth and development for Tier 3 families by screening children and offering families tailored supports. It omits factors related to child growth and development that HealthySteps cannot directly influence, such as the quality of available developmental and/or behavioral services in a community. The exhibit also assumes that families regularly attend well-child visits and that HealthySteps is implemented with fidelity to the model.



^b Reduction in maternal depressive symptoms may reduce risk for child development concerns.

Exhibit 1. HealthySteps Child Growth and Development Theory of Change



References

- 1 Roby, E., Canfield, C. F., & Mendelsohn, A. L. (2021). Promotion of parental responsivity: Implications for population-level implementation and impact. *Pediatrics*, *148*(2). <https://doi.org/10.1542/peds.2021-050610>
- 2 Cabecinha-Alati, S., O'Hara, G., Kennedy, H., & Montreuil, T. (2020). Parental emotion socialization and adult outcomes: The relationships between parental supportiveness, emotion regulation, and trait anxiety. *Journal of Adult Development*, *27*(4), 268–280. <https://doi.org/10.1007/s10804-019-09340-1>
- 3 Gross, R. S., Messito, M. J., Klass, P., Canfield, C. F., Yin, H. S., Morris, P. A., Shaw, D. S., Dreyer, B. P., & Mendelsohn, A. L. (2021). Integrating health care strategies to prevent poverty-related disparities in development and growth: Addressing core outcomes of early childhood. *Academic Pediatrics*, *21*(8), S161–S168. <https://doi.org/10.1016/j.acap.2021.04.005>
- 4 Center on the Developing Child at Harvard University. (2022). *How racism can affect child development*. <https://developingchild.harvard.edu/resources/racism-and-ecd/>
- 5 Center on the Developing Child at Harvard University. (2022). *Three principles to improve outcomes for children and families*. <https://developingchild.harvard.edu/resources/three-early-childhood-development-principles-improve-child-family-outcomes/>
- 6 ZERO TO THREE. (n.d.). *Why 0-3?* <https://www.zerotothree.org/why-0-3/>
- 7 Nix, R. L., Bierman, K. L., Domitrovich, C. E., & Gill, S. (2013). Promoting children's social- emotional skills in preschool can enhance academic and behavioral functioning in kindergarten: Findings from Head Start REDL. *Early Education & Development*, *24*(7), 1000–1019. <https://doi.org/10.1080/10409289.2013.825565>
- 8 Durlak, J., Dymnick, A., Taylor, R., Weissberg, R., & Shcellinger, K. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, *82*(1), 405–432. <https://doi.org/10.1111/j.1467-8624.2010.01564.x>
- 9 Healthy People 2030. (2022, September 8). *Early childhood development and education*. <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/early-childhood-development-and-education>
- 10 Center on the Developing Child at Harvard University. (2022). *Three principles to improve outcomes for children and families*. <https://developingchild.harvard.edu/resources/three-early-childhood-development-principles-improve-child-family-outcomes/>
- 11 Healthy People 2030. (2022, September 8). *Early childhood development and education*. <https://health.gov/healthypeople/priority-areas/social-determinants-health/literature-summaries/early-childhood-development-and-education>
- 12 Darling-Churchill, K. & Lippman, L. (2016). Early childhood social and emotional development: Advancing the field of measurement. *Journal of Applied Developmental Psychology*, *45*, 1–7. <https://doi.org/10.1016/j.appdev.2016.02.002>
- 13 Currie J. (2005). Health disparities and gaps in school readiness. *The Future of Children*, *15*(1), 117–138. <https://doi.org/10.1353/foc.2005.0002>
- 14 Data Resource Center for Child and Adolescent Health. (2022). 2019-2020 National Survey of Children's Health: Data query, Child and Family Health Measures Indicator 2.10. <https://www.childhealthdata.org/browse/survey/results?q=8556&r=1>
- 15 Data Resource Center for Child and Adolescent Health. (2022). 2019-2020 National Survey of Children's Health: Data query, National Outcome Measure 17.3. <https://www.childhealthdata.org/browse/survey/results?q=8579&r=1>
- 16 Guevara, J. P., Gerdes, M., Localio, R., Huang, Y. V., Pinto-Martin, J., Minkovitz, C. S., Hsu, D., Kyriakou, L., Baglivo, S., Kavanagh, J., & Pati, S. (2013). Effectiveness of developmental screening in an urban setting. *Pediatrics*, *131*(1), 30–37. <https://doi.org/10.1542/peds.2012-0765>
- 17 Hix-Small, H., Marks, K., Squires, J., & Nickel, R. (2007). Impact of implementing developmental screening at 12 and 24 months in a pediatric practice. *Pediatrics*, *120*(2), 381–389. <https://doi.org/10.1542/peds.2006-3583>

- 18 Bright Futures/American Academy of Pediatrics. (2022, July). Recommendations for preventive pediatric health care. https://downloads.aap.org/AAP/PDF/periodicity_schedule.pdf
- 19 Data Resource Center for Child and Adolescent Health. (2022). 2019-2020 National Survey of Children's Health: Data query, National Performance Measure 6. <https://www.childhealthdata.org/browse/survey/results?q=8562&r=1>
- 20 Centers for Disease Control and Prevention. (2022, August 15). *Why act early if you're concerned about development?* <https://www.cdc.gov/ncbddd/actearly/whyActEarly.html>
- 21 The National Early Childhood Technical Assistance Center. (2011, July). *The importance of early intervention for infants and toddlers with disabilities and their families.* <https://ectacenter.org/~pdfs/pubs/importanceofearlyintervention.pdf>
- 22 Gallegos, A., Dudovitz, R., Biely, C., Chung, P. J., Coker, T. R., Barnert, E., Guerrero, A. D., Szilagyi, P. G., & Nelson, B. B. (2021). Racial disparities in developmental delay diagnosis and services received in early childhood. *Academic Pediatrics, 21*(7), 1230–1238. <https://doi.org/10.1016/j.acap.2021.05.008>
- 23 Maenner, M., Shaw, K., Baio, J., Washington, A., Patrick, M., DiRienzo, M., Christensen, D. L., Wiggins, L. D... & Dietz, P. (2020). Prevalence of autism spectrum disorder among children aged 8 years: Autism and Developmental Disabilities Monitoring Network, 11 sites, United States, 2016. *MMWR Surveillance Summaries, 69*(4), 1–12. <https://doi.org/10.15585/mmwr.ss6904a1>
- 24 Bowen, S., Elliott, S., & Hardison-Moody, A. (2021). The structural roots of food insecurity: How racism is a fundamental cause of food insecurity. *Sociology Compass, 15*(7), e12846. <https://doi.org/10.1111/soc4.12846>
- 25 Gallegos, D., Eivers, A., Sondergeld, P., & Pattinson, C. (2021). Food insecurity and child development: A state-of-the-art review. *International Journal of Environmental Research and Public Health, 18*(17), 8990. <https://doi.org/10.3390/ijerph18178990>