Existing Recommendations

Chapter 2

As previously mentioned, the issue of childhood obesity prevention has been studied by multiple national and state-level groups, including the Institute of Medicine of the National Academies (IOM) Early Childhood Obesity Prevention Policies Committee (2011),[1] the White House Task Force (WHTF) on Childhood Obesity (2010),[2] the North Carolina Legislative Task Force on Childhood Obesity (2010),[3] the North Carolina Division of Public Health (DPH) (2010),[4] the North Carolina Institute of Medicine (NCIOM) Prevention Task Force (2009),[5] and the North Carolina Health and Wellness Trust Fund Commission (NC HWTF) Study Committee on Childhood Obesity (2005)[6]. These groups identified evidence-based strategies or best and promising practices aimed at reducing childhood obesity and developed recommendations to incorporate them. Some of the recommendations were focused on older children; others were focused on infants and young children ages 0-5 years. Rather than reinvent the work of these various task forces, the NCIOM Task Force on Early Childhood Obesity Prevention examined the existing recommendations targeted at reducing childhood obesity among infants and young children ages 0-5 years in order to develop a strategic implementation plan for the state of North Carolina. This chapter provides a brief overview of the focus of each of these six reports, as well as common strategies to prevent or reduce early childhood obesity.

The Task Force examined the existing recommendations targeted at reducing childhood obesity among infants and young children ages 0-5 years in order to develop a strategic implementation plan for the state of North Carolina.

Overview of Prior Reports

Institute of Medicine's of the National Academies (IOM) Early Childhood Obesity Prevention Policies Committee (2011)

The IOM's Early Childhood Obesity Prevention Policies Committee was given the charge to gather primary and secondary evidence and provide recommendations on obesity prevention policies for young children ages 0-5 years. The committee focused on nutrition, physical activity, and sedentary behavior policies, and addressed differences in obesity prevention policies for children ages 0-2 years and ages 2-5 years. The committee gathered evidence-based strategies that have shown a direct impact on childhood obesity prevention, and also drew on the experience and expert opinions of the committee members. In addition to families who take care of children, the IOM recommendations were targeted toward individuals who support parents, such as health care professionals, educators, and government agencies, as well as individuals who influence children's environments outside of the home, such as child care providers, local governments, and policymakers.[1]

White House Task Force (WHTF) on Childhood Obesity (2010)

The WHTF on Childhood Obesity was created at the request of President Barack Obama. The Task Force reviewed research and consulted experts to produce a set of recommendations to reduce overweight and obesity in the United States. The WHTF recommendations focused on reducing overweight and obesity by empowering parents and caregivers, improving healthy food in schools, increasing access to healthy affordable foods, and increasing physical activity.[2]

North Carolina Legislative Task Force on Childhood Obesity (2010)

The North Carolina Legislative Task Force on Childhood Obesity was created by the North Carolina General Assembly (NCGA) in the 2009 session. This Task Force was charged with providing recommendations to the NCGA on strategies to prevent childhood obesity. Recommendations centered around nutrition and physical activity standards in child care centers; screening at-risk children for unhealthy weight; and supporting state employees who choose to breastfeed. The North Carolina Legislative Task Force report focused on child care centers, the North Carolina Medicaid and Healthy Choice programs, and the State Personnel Commission.[3]

All of these reports included recommendations to prevent and reduce childhood obesity for children ages 0-5 years.

North Carolina Division of Public Health (DPH) (2010)

Enhanced Nutrition Standards for Child Care: Final Report to the General Assembly is a product of DPH in association with the North Carolina Division of Child Development. The Task Force focused on healthy eating, physical activity, early childhood interventions, and the role of child care facilities. The report recommended implementation of nutrition standards for licensed child care facilities.[4]

North Carolina Institute of Medicine (NCIOM) Prevention Task Force (2009)

At the request of North Carolina foundations including the Blue Cross and Blue Shield of North Carolina Foundation, The Duke Endowment, the Kate B. Reynolds Charitable Trust, and the North Carolina Health and Wellness Trust Fund, the NCIOM was asked to convene the Prevention Task Force in 2005. The Task Force first identified the leading causes of death and disability in the state, as well as the preventable risk factors that contribute to these causes. The Task Force then identified evidence-based strategies and best or promising practices aimed at reducing the preventable risk factors, including poor nutrition and physical inactivity.[5] For ages 0-5 years, the NCIOM recommended increasing physical activity and improving nutrition in child care programs and after-school programs.

North Carolina Health and Wellness Trust Fund (NC HWTF) Study Committee on Childhood Obesity (2005)

The NC HWTF was created by the NCGA from the Tobacco Master Settlement Agreement. The NC HWTF was charged with the task of implementing and investing in programs to improve the health of North Carolinians. The NC HWTF previously funded initiatives on tobacco prevention and cessation, obesity prevention, health disparities elimination, and prescription assistance.[7] One of the NC HWTF initiatives was the creation of a study committee on the prevention of childhood obesity. The purpose of the committee was to examine the causes and status of childhood obesity in North Carolina and to make policy recommendations to the NCGA and appropriate state agencies to change

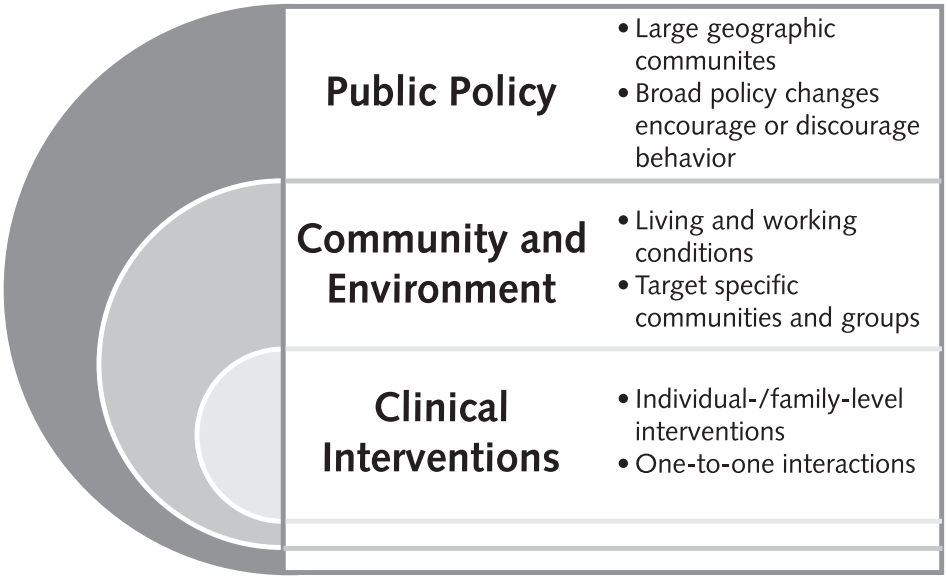
the course of childhood obesity.[6] The NC HWTF recommendations focused on educating health professionals and educators; encouraging providers and educators to measure BMI; and improving nutrition and physical activity in faith-based organizations and child care programs.

All of these reports included recommendations to prevent and reduce childhood obesity for children ages 0-5 years. These recommendations contained evidence-based strategies and best or promising practices. The NCIOM Task Force on Early Childhood Obesity Prevention used these recommendations as the starting point for its blueprint. Generally, the recommendations provided in the six reports fall into eight categories, including prenatal care, breastfeeding, growth monitoring, sleep, healthy eating behaviors and nutrition, screen time, physical activity, and those that are crosscutting or more general in nature. The full recommendations from these six expert groups are listed in Appendix D.

The Task Force focused its intervention strategies on three of the levels of the socioecological model: clinical, community and environment, and public policy.

The NCIOM Early Childhood Obesity Prevention (ECOP) Task Force members recognized the necessity to implement strategies targeting multiple settings or levels of intervention, rather than to implement one specific strategy or focus on one particular level of intervention. Thus, the ECOP Task Force's blueprint for health interventions is adopted from the socioecological model of health behavior. Individuals' behaviors and health are influenced by levels that extend from the individual and family, to the individuals' community and local group affiliations, and, at the broadest level, to the systemic policies and structures. The socioecological model recognizes that multifaceted interventions that include clinical, community and environment, and public policy changes have a better chance of affecting individual behavior than an intervention at any one specific level (see Figure 2.1).[8] The Task Force focused its intervention strategies on three of the levels of the socioecological model: clinical, community and environment, and public policy. Clinical interventions are based on one-on-one interactions with health professionals at the individual or family level, and address the specific needs of the individuals and their families. Community and environment level interventions are constructed around local communities and social groups, including but not limited to workplaces, schools, and places of worship, to target behavior change. Public policy changes are the highest level of interventions that encourage or discourage behaviors through large sectors such as the environment, transportation, health care regulation, and urban planning.[8]

Figure 2.1
Socioecological Model of Health Interventions



Source: Adapted from Ockene JK, Edgerton EA, Teutsch SM, et al. Integrating evidence-based clinical and community strategies to improve health. *Am J Prev Med.* 2007;32(3):244-252.

North Carolina has demonstrated success in changing behaviors to improve population health through the implementation of a multifaceted strategy using all levels of the socioecological model.

North Carolina has demonstrated success in changing behaviors to improve population health through the implementation of a multifaceted strategy using all levels of the socioecological model. For example, this type of approach has effectively reduced levels of tobacco use in North Carolina. Starting in 2003, North Carolina funded the NC HWTF, which implemented a marketing campaign, Tobacco. Reality. Unfiltered (TRU), that targeted individual behaviors and provided quitline services through Quitline NC (now operated by DPH) to support individuals wanting to quit using tobacco. At the community level, private funders supported initiatives to reduce tobacco use in the community through the 100% tobacco-free schools and hospitals initiatives. Additionally, the NCGA initiated broad-level policy interventions such as increasing the tobacco tax and mandating that all public schools be 100% tobacco-free. Prior to these strategies, the adult smoking rate had remained at 25% in North Carolina from 1995 to 2003. Since implementing these multifaceted strategies targeting all levels of the socioecological model, the percentage of adults smoking decreased from 24.7% in 2003[9] to 21.8% in 2011;[10] high school use declined from 24.8% in 2003[11] to 17.7% in 2011;[12] and middle school use dropped from 12.8% in 2003[13] to 7.6% in 2011.[14] Based upon the success of multifaceted approaches in improving the public's health, the ECOP Task Force recategorized the recommendations from the existing reports into three broad categories: clinical, community and environment, and public policy. These are summarized below. The collection of these recommendations by category and level in the socioecological model are shown in Table 2.1.

Table 2.1
Recommendations from National and State-level Groups to Reduce Early Childhood Obesity (Organized Around Clinical, Community and Environment, and Policy Interventions)

	Clinical	Community and Environment	Policies
Prenatal Care	Educate women on healthy weight gain during pregnancy (WHTF)	Education and outreach through creative public campaigns on prenatal care (WHTF)	
Breastfeeding	Hospitals and health care providers should encourage mothers to breastfeed (WHTF) Health care providers and insurers should provide information to pregnant women and new mothers on breastfeeding (WHTF) Local health departments and community-based organizations should develop peer support programs for breastfeeding (WHTF) Early childhood settings, health care providers, and government agencies should support breastfeeding (WHTF, NC Legislative Task Force)	Adults who work with infants and their families should promote and support exclusive breastfeeding for six months and breastfeeding in conjunction with complementary foods for one year or more (IOM) Local health departments and community-based organizations should develop peer support programs for breastfeeding. (WHTF) Early childhood settings, health care providers, and government agencies should support breastfeeding (WHTF, NC Legislative Task Force)	Early childhood settings, health care providers, and government agencies should support breastfeeding (WHTF, NC Legislative Task Force)
Growth Monitoring	Health care professionals should measure children's height and weight as part of every well-child visit (IOM) Health care professionals should consider the BMI of the child and parents as risk factors (IOM, NC HWTF)		Community Care of North Carolina, in collaboration with local agencies, should require BMI screening for at-risk children (NC Legislative Task Force)
Sleep	Health and education professionals should be trained to counsel parents about their child's age-appropriate sleep duration (IOM)		Child care regulatory agencies should require child care providers to adopt practices that promote age-appropriate sleep duration (IOM)

	Clinical	Community and Environment	Policies
Healthy Eating and Nutrition	Health and education professionals should be trained in ways to help improve children's eating habits and should counsel parents about diet (IOM)	Physical activity and nutritious food options in child care programs should be expanded (NCIOM) DPH and North Carolina Partnership for Children should expand dissemination of evidence-based approaches to improve physical activity and nutrition in child care and preschool using the Nutrition and Physical Activity Self Assessment for Child Care (NAP SACC) (NCIOM) Church and faith-based organizations should serve healthy and nutritious snacks, serve as community locations for physical activity, emphasize the significance of family meals, and explore ways to open their proprietary recreational facilities to their member children/families (NC HWTF) Foundations should give preference to applicants that demonstrate high standards of physical activity and nutrition (NC HWTF) Communications and media associations should include broadcasts/campaigns to promote healthy eating and physical activity (NC HWTF) North Carolina hospitals and medical centers should offer healthy food and beverage choices and physical activity opportunities (NC HWTF)	The federal government should provide guidelines to states, providers, and families on how to increase physical activity, improve nutrition, and reduce screen time in early child care settings (WHTF) States should strengthen licensing standards and quality rating and improvement systems in early education and child care settings (WHTF) US DHHS and US Department of Agriculture should establish dietary guidelines for children ages 0-2 years (IOM) Government agencies should promote access to affordable healthy foods for infants and young children ages 0-5 years by maximizing participation in federal nutrition assistance programs and increasing access to healthy foods (IOM) The Federal Trade Commission, US Department of Agriculture, CDC, and FDA should continue work on uniform voluntary national nutrition and marketing standards for food and beverages marketed to children (IOM) Child care regulatory agencies should require that all meals, snacks, and beverages that are served be consistent with the Child and Adult Care Food Program meal patterns, and that safe drinking water is available and accessible to children (IOM)

	Clinical	Community and Environment	Policies
Healthy Eating and Nutrition			Child care regulatory agencies should require child care providers and early childhood educators to practice responsive feeding (IOM) North Carolina Lt. Governor and Co-Chairs of the study committee should send letters to the packaged food industry in North Carolina commending those that have developed and distributed age-appropriate portion sizes for snack foods and beverages (NC HWTF) North Carolina Lt. Governor and Co-Chairs of the study committee should send letters to North Carolina congressional representatives to consider limits on youth-targeted advertising of unhealthy foods and beverages (NC HWTF) The North Carolina Star Rated License system of child care programs should be examined as a possible point of intervention by placing more emphasis on physical activity and nutrition criteria (NC HWTF) Enhanced child nutrition standards established should be implemented in two phases (NC DPH) North Carolina Child Care Commission should assess the process to include healthy eating and physical activity as quality indicators in North Carolina's Star Rated License (NCIOM)

	Clinical	Community and Environment	Policies
Screen Time	Health care professionals should counsel parents on screen time (IOM) American Academy of Pediatrics guidelines on screen time should be made more widely available; encourage children to limit screen time (WHTF)	Adults working with children should limit screen time to less than two hours per day (IOM) American Academy of Pediatrics (AAP) guidelines on screen time should be made more widely available; encourage children to limit screen time (WHTF) State and local government agencies providing training, tools, and technical assistance to child care providers and early education program teachers should provide training on how to counsel parents on the importance of reducing screen time for young children (IOM)	The federal government should provide guidelines to states, providers, and families on how to increase physical activity, improve nutrition, and reduce screen time in early child care settings (WHTF) States should strengthen licensing standards and quality rating and improvement systems in early education and child care settings (WHTF)
Physical Activity	Health and education professionals should be trained in methods to increase children's physical activity and reduce their sedentary behavior (IOM)	The community and its environment should promote physical activity (IOM) Physical activity and nutritious food options in child care programs should be expanded (NCIOM) DPH and North Carolina Partnership for Children should expand dissemination of evidence-based approaches to improve physical activity and nutrition in child care and preschool using NAP SACC (NCIOM) Church and faith-based organizations should serve healthy and nutritious snacks, serve as community locations for physical activity, emphasize the significance of family meals, and explore ways to open their proprietary recreational facilities to their member children/ families (NC HWTF)	Child care regulatory agencies should require child care providers and early childhood educators to provide opportunities for children to be physically active throughout the day (IOM) Child care regulatory agencies should allow children to move freely (IOM) The federal government should provide guidelines to states, providers, and families on how to increase physical activity, improve nutrition, and reduce screen time in early child care settings (WHTF) States should strengthen licensing standards and quality rating and improvement systems in early education and child care settings (WHTF)

	Clinical	Community and Environment	Policies
Physical Activity		Foundations should give preference to applicants that demonstrate high standards of physical activity and nutrition (NC HWTF) Communications and media associations should include broadcasts/campaigns to promote healthy eating and physical activity (NC HWTF) NC hospitals and medical centers should offer healthy food and beverage choices and physical activity opportunities (NCHWTF)	DPH should develop physical activity guidelines for ages 0-2 years and promote the program to child care programs (NC HWTF) North Carolina Child Care Commission should assess the process to include healthy eating and physical activity as quality indicators in North Carolina's Star Rated License system (NCIOM) The NC Star rating system of childcare centers should be examined as a possible point of intervention by placing more emphasis on physical activity and nutrition criteria (NCHWTF)
General	Instruction in health professional schools on prevention: healthy eating, physical activity, and effective behavior counseling (NC HWTF) Educate North Carolina providers on obesity prevention and weight management (NC HWTF) State Health Plan, Medicaid, Health Choice, and special health services coverage in North Carolina should increase funding for services that promote healthy lifestyles (NC HWTF)	North Carolina Association for the Education of Young Children and other statewide associations that promote the education and health of young children in North Carolina should consider policies that promote proper nutrition and increased physical activity (NC HWTF) NC HWTF and BCBSNC Foundation should continue the FitTogether television series and website beyond the three year plan (NC HWTF) US DHHS and other partners should establish a social marketing campaign to provide pregnant women and caregivers of children ages 0-5 years information on risk factors for obesity and strategies for prevention (IOM)	NCDOI should study the fiscal impact of prevention and treatment of childhood obesity (NC HWTF) State Health Plan, Medicaid, Health Choice, and Special Health Services coverage in North Carolina should increase funding for services that promote healthy lifestyles (NC HWTF) Insurers should adopt policies that incentivize healthier lifestyles (NC HWTF) Researchers in North Carolina should be commended and encouraged to research links between nutrition/ physical activity and academic performance (NC HWTF)

Clinical Interventions

Clinical interventions for reducing early childhood obesity among children ages 0-5 years focused on two broad areas: enhanced training for health professionals, and the clinical guidance health professionals should give to both their patients and the parents of their patients.

The IOM and NC HWTF recommended that health professionals receive enhanced training about evidence-based strategies to prevent early childhood obesity. Information in the training should include, but not be limited to: the link between breastfeeding and the reduced risk of childhood obesity or overweight; the importance of measuring BMI; healthy eating, sleeping, and physical activity strategies (including reduced screen time); and effective behavior counseling. Health professionals should receive this training in school as part of their clinical rotations, in residency training, and as part of continuing education.

Clinical interventions focused on two broad areas: enhanced training for health professionals, and the clinical guidance health professionals should give to both their patients and the parents of their patients.

The IOM and WHTF also recommended that health professionals advise their patients about strategies to prevent and/or reduce early childhood obesity. Health professionals should routinely educate pregnant women and women planning pregnancy about the link between the mother's preconception weight, healthy weight gain during pregnancy, and breastfeeding in reducing the risk of childhood obesity. In addition, health providers, hospitals, and health systems should encourage mothers to breastfeed for at least six months. Health insurers can support this effort by paying for lactation consultation and support to help women breastfeed their infants. Additionally, health professionals should counsel patients and parents on limiting screen time.

Pediatricians and other health professionals should routinely measure the child's weight and height as part of every well-child visit. They should consider the BMIs of the child and the parents in the risk assessment for overweight and obesity. Health professionals should advise parents about healthy weight gain during infancy and young childhood. They should also advise parents about the need for physical activity and reduced screen time as other strategies to reduce early childhood obesity. In addition, health professionals should counsel parents about children's age-appropriate sleep durations.

Community and Environment Interventions

The community and environment interventions focused on encouraging community organizations and settings to promote best practices to reduce early childhood obesity, and foundations and payers to support best practices.

The NC HWTF, IOM, NC Legislative Task Force, and WHTF recommended that hospitals and medical centers, educators (including early child care settings), and faith-based organizations promote proper nutrition, healthy food, and healthy beverage choices; implement physical activity opportunities; and limit screen time. Insurers can support these efforts by incentivizing healthier lifestyles. Foundations should incentivize community organizations by giving

funding preferences to organizations that demonstrate high standards for physical activity and nutrition. Early childhood settings, the North Carolina State Personnel Commission, and community-based organizations should develop programs to support breastfeeding for at least the first six months of life.

The WHTF and NC HWTF recommended that local public campaigns be implemented to promote prenatal care, healthy eating, and physical activity. The NC HWTF and BCBSNC Foundation should continue funding the FitTogether television series and website.

Public Policy Interventions

Changing public policies can also affect health. In the context of this report, we are using a broad definition of the term "public policies." Public policies include legislation and regulatory actions. We also include voluntary standards, established by governmental agencies, as public policies. Voluntary standards can help affect large scale change if they are widely recognized and adopted by multiple organizations.

Community and environment interventions focused on encouraging community organizations and settings to promote best practices to reduce early childhood obesity and foundations and payers to support best practices.

The evidence-based and evidence-informed public policy interventions primarily focused on public education campaigns, more specific regulations for child care programs and government agencies, and increased standards for the food and beverage industry.

The WHTF, IOM, and NC HWTF recommended that government agencies provide information to states, providers, and families on strategies to increase physical activity, improve nutrition, and reduce screen time. In addition, information should be provided about the links connecting prenatal care and breastfeeding to childhood obesity, and about the links between nutrition, physical activity, and academic performance. Education and creative public campaigns should be used to improve awareness.

The WHTF, NCIOM, NC HWTF, NC Legislative Task Force, DPH, and IOM recommended that states should strengthen licensing standards and quality rating improvement systems in early education and child care settings, including standards on physical activity, nutrition, and age-appropriate sleep duration. DPH, the US Department of Health and Human Services, and the US Department of Agriculture can support this effort by creating guidelines for children ages 0-5 years. North Carolina should use the North Carolina Star Rated License system of child care programs to improve standards in early child care programs. Regulatory agencies can support efforts by ensuring regulations allow children to move freely whenever possible, and by requiring that food and beverages served are consistent with federal Child and Adult Care Food Program standards.

The IOM and NC HWTF recommended that government entities, including the US Federal Trade Commission, US Department of Agriculture, Centers for

Disease Control and Prevention (CDC), and US Food and Drug Administration (FDA), and political leaders encourage nutrition and marketing standards for food and beverages marketed to young children and promote access to affordable healthy foods. Private industry should be encouraged to market and produce foods and beverages with improved nutritional value for children ages 0-5 years.

Changing public policies can also affect health.

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