Childhood Obesity Prevention Strategies for Rural Communities

Nemours®

Acknowledgements

Nemours is an internationally recognized children's health system that owns and operates the Nemours/Alfred I. duPont Hospital for Children in Wilmington, Delaware, and Nemours Children's Hospital in Orlando, along with major pediatric specialty clinics in Delaware, Florida, Pennsylvania and New Jersey. Established as The Nemours Foundation through the legacy and philanthropy of Alfred I. duPont, Nemours offers pediatric clinical care, research, education, advocacy and prevention programs to families in the communities it serves.

Nemours developed this toolkit in 2014 to provide examples of obesity prevention initiatives and strategies in rural communities to help advance the field and spread what works. This toolkit was prepared by:

- **Arianne Corbett, RD**
  Managing Director, Leading Health LLC
- **Daniella Gratale, MA**
  Senior Manager of Advocacy, Nemours
- **Wendy Ellis, MPH**
  Manager of Policy, Nemours
- **Christopher Revere, MPA**
  Director, Office of Child Health Policy and Advocacy, Nemours
- **Debbie I. Chang, MPH**
  Vice President of Policy and Prevention, Nemours

Nemours is grateful for the use of the *Rural Assistance Center Rural Obesity Prevention Toolkit* and the *Obesity Prevention in Rural Communities Formative Research Report* developed by NORC at the University of Chicago Walsh Center for Rural Health Analysis, which provided the background and framework for the development of this toolkit. Nemours also greatly appreciates the contributions of Karen Harris Brewer, MPH, who was the lead author for the toolkit and report.

Nemours would like to thank the individuals who contributed to the development of this toolkit by providing key information, resources, input, feedback and thoughtful review.

- **Katie Clarke Adamson**
  Director of Health Partnerships and Policy, YMCA of the USA
- **Charlie Alfero, MA**
  Executive Director, Hidalgo Medical Services, Center for Health Innovation
- **Thiele Anthony, MD**
  Physician in Charge, Nemours duPont Pediatrics, Seaford
- **Beth Ashbaugh**
  Director, Apple Seeds, Inc.
- **Jon M. Bailey**
  Director of Research and Analysis, Center for Rural Affairs
- **Robin Brennan, DrPH**
  Manager, Capacity and Knowledge Development, Nemours Health & Prevention Services
- **Katie Boles, RD, LDN**
  Brenner FIT Program, Brenner Children's Hospital
- **Charlene Burgeson, MA**
  Senior Director for Education and Health, U.S. Programs, Save the Children
- **Siobhan Casey, MS**
  Senior Advisor, Special Initiatives, Child Care Aware of America
- **Carol Chong, MA, RD**
  National Nutrition Advisor, Alliance for a Healthier Generation
- **Brandy Clarke, PhD**
  Research Assistant Professor – CYFS, University of Nebraska, Lincoln
- **Sonya Clay**
  Assistant Director of Federal Affairs, American Academy of Pediatrics
- **Lisa Davis, MHA**
  Director and Outreach Associate Professor of Health Policy and Administration, Pennsylvania Office of Rural Health
- **Shelby Dettinger**
  Grant Programs Officer, World Vision
- **Marilyn Dold**
  Healthy Communities Consultant, Washington State Department of Health
- **Dawn Dugan**
  County Youth Coordinator and Office Manager, Iowa State University Extension and Outreach, Ringgold County
- **Mary Dussol**
  Healthy Communities Consultant, Washington State Department of Health
- **Ed Dzedzy, RS**
  Administrator, Lincoln County Health Department, Washington
- **Lise Erdrich, MS, CPS, CCDCIII**
  School Health Coordinator, Circle of Nations School
- **Jolene Erickson, RN**
  Public Health Nurse, Lincoln County Health Department, Washington
- **Andrea Farmer, MS**
  Nutritionist, Child Nutrition Programs, U.S. Department of Agriculture, Food and Nutrition Service
- **Karol Fink, MS, RD**
  Program Manager, Obesity Prevention and Control Program, Alaska Department of Health and Social Services
- **Becky Fletchall, RN, BSN**
  Ringgold County Public Health
- **Natalie Freeman**
  Program Coordinator, Apple Seeds NWA
- **Allison Gertel-Rosenberg, MS**
  Director of National Prevention and Practice, Nemours
- **Lesley Graham, MS**
  Associate Director, Health, School-Age Programs, Save the Children, U.S.
- **Carrie Guhlke Falk, MA**
  Public Relations Director, Lincoln Hospital District, Washington
- **Donna Harris**
  Child Nutrition Director, Perquimans County Schools
- **Sandra Hassink, MD, FAAP**
  Director of the Nemours Obesity Initiative, Assistant Professor of Pediatrics, Nemours/Alfred I. duPont Hospital for Children, Wilmington, Delaware
- **Daniel Hatcher, MPH**
  National Healthy Out-of-School Time Advisor, Alliance for a Healthier Generation
- **Katherine Hawksworth, MPH, CHES**
  Program Manager, California Project LEAN

Acknowledgements (continued)

- **Pepper Henyon, MD**
  Pediatrician, Bozeman Deaconess Pediatrics
- **Alisha Herrick, MPH**
  Program Specialist, Hidalgo Medical Services, Center for Health Innovation
- **Vicki Hill**
  Food Service Director, Bismarck Public Schools
- **Jennifer Hofman, MS**
  Specialist, Health Partnerships and Policy, YMCA of the USA
- **John Hollis**
  Senior Advisor, Policy, Community Infrastructure and Government Affairs, Nemours Health & Prevention Services
- **Eleanor Hughes, MS, CHES**
  Health Education Outreach, University of Arkansas for Medical Sciences – Northwest
- **Carla Huyek**
  Manager, Healthy Communities Program, Washington State Department of Health
- **W. Brad Jones, PhD**
  formerly ORISE Research Participant, Centers for Disease Control and Prevention
- **Patricia Knowles**
  Director, Macon Community Child Development Center
- **Betty Lammle**
  Region VII Program Manager, Office of Child Care, Administration for Children and Families, U.S. Department of Health and Human Services
- **Catherine Lillehoj, PhD**
  Research Analyst, Division of Health Promotion and Chronic Disease Prevention, Iowa Department of Public Health
- **M. Nawal Lutfiyya, PhD**
  Senior Research Scientist and Professor at Essentia Institute of Rural Health
- **Mary Musil**
  Manager, Child and Adult Care Food Program, Montana Department of Public Health and Human Services
- **Dave Nichols**
  Manager, Capacity and Knowledge Development, Nemours Health & Prevention Services
- **David Procter, PhD**
  Director, Center for Engagement and Community Development; Director, Institute for Civic Discourse and Democracy, Kansas State University
- **Sandy Procter, PhD**
  Assistant Professor, Extension Specialist, K-State Research and Extension, Expanded Food and Nutrition Education Program (EFNEP) Coordinator, Kansas State University
- **Lauren Puzen, MSW, MPH**
  Healthy Out-of School Time Manager, Alliance for a Healthier Generation
- **Kiev Randall, MS, RD**
  Program Analyst, Child Nutrition Programs, U.S. Department of Agriculture, Food and Nutrition Service
- **Mary Reddics**
  Co-chair, Duncan Health Council
- **Brenda Rouzer**
  Program Reporting Coordinator, CESA 11 Head Start
- **Kristine Sande, MBA**
  Program Director, Rural Assistance Center, Associate Director, the University of North Dakota Center for Rural Health School of Medicine and Health Sciences
- **Yvette Santiago**
  Director, Policy, Community Infrastructure and Government Affairs, Nemours Health & Prevention Services
- **Barbara Sawyer**
  Director of Special Projects, National Association of Family Child Care
- **Richard Schott**
  Senior Chief of National Programs, Child Care Aware of America
- **Rose Segreti**
  formerly Chief of Special Initiatives, Child Care Aware of America
- **Kevin Sheahan, MD**
  Chief, Nemours duPont Pediatrics, Dover
- **Susan Sheridan, PhD**
  George Holmes University Professor of Educational Psychology; Director, Nebraska Center for Research on Children, Youth, Families and Schools; Director, National Center for Research on Rural Education, University of Nebraska – Lincoln
- **Julie Shuell, MPA**
  Project Director, Nemours
- **Vicki Sickels**
  CTG Grant Manager, Ringgold County Public Health
- **Mary Vann Sitton, MS, SNS**
  Procurement Consultant, School Nutrition Specialist, N.C. Dept. of Public Instruction – Child Nutrition Services, Safe and Healthy Schools Support Division
- **Jennifer Skuza, PhD**
  Assistant Dean, Extension Center for Youth Development, University of Minnesota
- **Dan Smith**
  Executive Director, Cadillac Area YMCA
- **Elizabeth Sparks**
  4-H Extension Assistant Agent, Pima County Cooperative Extension, College of Agriculture and Life Sciences, The University of Arizona
- **Laura Stadtfeld, CDA**
  Director, Laurie's Inn Family Child Care Home
- **Alexis Steines**
  Field Outreach Manager, Afterschool Alliance
- **Cayla Taylor, MS**
  4-H Youth Program Specialist, Iowa State University Extension and Outreach
- **Darcy Tessman**
  Associate Agent, 4-H Youth Development, Cochise County
- **Kelli O. Thompson, JD**
  Director, Capacity and Knowledge Development, Nemours Health & Prevention Services
- **Tatiana Tucker, MSA**
  Child Care Program Specialist, Administration for Children and Families, Office of Child Care, U.S. Department of Health and Human Services
- **Cyndi Walters**
  formerly Program Director, California Project LEAN, currently Health Program Specialist, California Department of Public Health
- **Susan Wilger, MPA**
  Director of Programs, Hidalgo Medical Services, Center for Health Innovation

Table of Contents

Chapter 1: Introduction

Childhood Obesity in the United States

Over the past 30 years, childhood obesity rates in the U.S. have tripled. Today, nearly a third of children in the U.S. are overweight or obese.[1] More and more, children are being diagnosed with obesity-related conditions that were traditionally only seen in adults, such as type 2 diabetes and high blood pressure. The early onset of these chronic conditions puts children at higher risk for serious conditions like heart disease, cancer and stroke later in life.[2]

This risk is even higher in rural and minority populations, which bear an even greater burden of childhood obesity. The proportion of overweight and obese children skyrockets to 40 percent within some African-American and Hispanic communities.[3] Also staggering, children living in rural areas are 25 percent more likely than those in metropolitan areas to be overweight or obese.[4] But there is hope. After decades of rising rates, obesity among low-income preschoolers has begun to decline slightly in 19 states and U.S. territories,[5] including largely rural states such as Georgia, Mississippi, Iowa, Kansas and South Dakota.

While no one specific factor was determined to be the cause of the reduction in obesity rates, the Centers for Disease Control and Prevention (CDC) identified a number of initiatives that may have improved diets among low-income preschool children and their families. These include local and state initiatives to implement early care and education (ECE) nutrition and physical activity standards, efforts to improve healthier food options and physical activity offerings in communities, and the updated Women, Infants and Children (WIC) package of nutritious foods, now consistent with the Dietary Guidelines for Americans.[5]

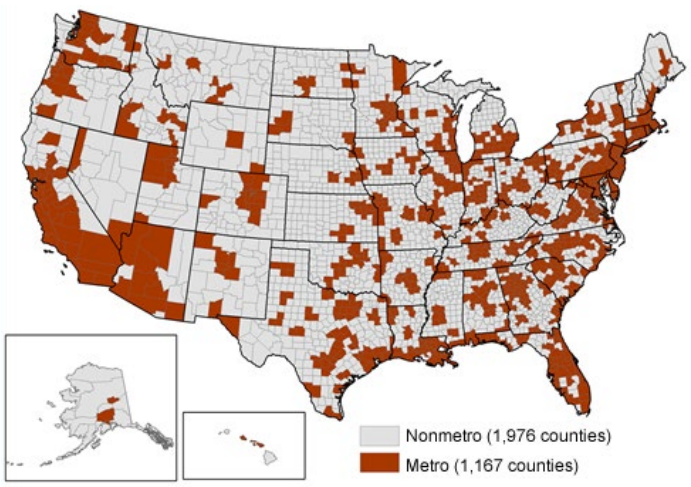
Why Is Obesity a Challenge in Rural Communities?

Certain characteristics of rural communities contribute to the problem of childhood obesity. Rural residents tend to eat diets higher in fat and calories, exercise less, and watch more television, all of which can contribute to unhealthy weight gain.[6] Rural communities face barriers to addressing obesity, such as higher poverty levels, less access to opportunities for physical activity and healthy eating, and limited resources to provide nutritious foods and physical education in school.[7] Many rural residents also live in "food deserts" – areas without ready access to fresh, healthy and affordable food. Instead of supermarkets and grocery stores, these communities may have no food access or are served only by fast food restaurants and convenience stores that offer few healthy, affordable food options. The lack of access contributes to a poor diet and can lead to higher levels of obesity and other diet-related diseases, such as diabetes and heart disease.[8] However, one of the greatest assets of a rural environment is the community. Close-knit ties within communities, the amazing spirit for volunteerism, and the network of caring individuals provide the basis for which these challenges can be overcome. This toolkit aims to provide communities with a range of strategies, interventions and tools to make that happen.

How We Define "Rural"

Multiple definitions of the term "rural" have been developed by Federal agencies to classify areas and populations, as well as to target programs and funds.[9] The definitions are not consistent, but both the U. S. Census Bureau and the Office of Management and Budget begin by defining urban areas first, and then defining rural areas as those that are not urban.

For the purposes of this toolkit, "rural" is defined in the broadest sense. In order to present a range of strategies and interventions, the examples in this toolkit are from communities that are not urban or suburban. Because rural communities differ greatly in size, environmental characteristics, access to healthy foods, opportunities for physical activity, demographics and socioeconomic characteristics, a variety of options will be presented, many of which can be tailored to fit the needs of a specific community.



Source: USDA, Economic Research Service using data from the U.S. Census Bureau.

Science-Informed, Promising and Emerging Strategies

Successful childhood obesity prevention strategies and interventions alter the physical and social environment to make the healthy and active choice the easy choice. However, relatively few programs to address policy, systems and environmental change have been tested in a rural setting. Rural providers who wish to address environmental barriers to healthy eating and physical activity may need to look at promising or emerging strategies for guidance and then consider how it might fit their community. For the purposes of this toolkit, strategies and interventions are science-informed, and promising and emerging strategies are included.

How to Use This Toolkit

This toolkit is intended to provide a range of science-informed, promising or emerging obesity prevention strategies to address childhood obesity in rural communities in five different sectors that serve children.

Sectors Include:

- **Early Care and Education:** Head Start, Pre-K, child care centers and family child care
- **Schools:** Elementary, middle, junior high and high schools
- **Out-of-School Time:** Traditional afterschool programs, weekend, summer and holiday programs
- **Other Community Initiatives:** Community wellness councils and coalitions, grocery stores, farmers' markets, community gardens, walking and biking trails, community recreation facilities, etc.
- **Health Care:** Primary care, hospitals and community health workers

For each child-serving sector, the toolkit is organized as follows:

- The *Introduction* presents the role each sector plays in child obesity prevention, along with a discussion of the unique assets and challenges for each.
- *Strategies* are provided with an explanation of important considerations and adaptations for rural communities.
- *Strategies in Action* offer success stories to highlight the different ways rural providers have implemented recommended strategies in their communities.
- *Initiatives Successfully Implemented in Rural Settings* provide a list of programs or initiatives that were developed in all types of communities, but have been tested in rural settings, along with tools to facilitate their implementation.
- *Rural Community Spotlight* provides a more in-depth case study to highlight the ways communities are coming together to implement multiple strategies for success.
- *Additional Tools and Resources* provide additional information, including more general tools, training and technical assistance to support providers as they implement obesity prevention strategies.

Prior to the sector-specific chapters is a section with common themes and lessons learned from the wide variety of rural providers interviewed for this toolkit. Following the sector-specific chapters are recommendations for how policy-makers can support childhood obesity prevention in rural communities; a section on monitoring and evaluating progress; and a conclusion.

Chapter 2: Common Themes and Lessons Learned

Overview

This section identifies a number of common themes and lessons learned from the childhood obesity prevention strategies and initiatives presented in the following chapters. The stories profiled in this toolkit showcase a wide range of initiatives from rural communities across the country. The communities vary in size, geography, culture and language; however, they share a deep commitment to combatting childhood obesity.

Include Dynamic Leadership

For many of the communities profiled, a dynamic leader or key group of champions emerged who were determined to change their communities for the better. They utilized creative solutions to problems and roadblocks and engaged traditional and nontraditional partners to achieve their goals. They were results-oriented and credible, and possessed strong interpersonal skills. Most importantly, they used every tool and opportunity available to persuade others to join in their efforts to improve the health of the children in the community.

Build Support From Community Leaders

Community leaders frequently recommended the need for support from both official decision makers and natural leaders. Formal leaders, such as superintendents, school board members, elected officials and religious leaders, were critical to the success of an initiative, in addition to informal community leaders like veteran teachers, former police chiefs and well-respected football coaches. Both types of leaders used their influence to generate support for the initiatives, build public will, and obtain resources from public and private sources. Involving those key members of the community played an important role in engaging other stakeholders and recruiting additional leaders to invest time and resources in the initiatives.

Utilize Multi-Sector Partnerships

The most effective initiatives occurred when broad coalitions of government, private and public organizations, community groups, and individual community members came together to solve problems that affected the whole community. Successful initiatives engaged various sectors of the community best suited to provide input to and facilitate achievement of the overall goals of the project. A few examples included the local farmer who could provide fresh produce to the school or the transportation board that offered low-cost bus rides to an afterschool program. By building strategic alliances, the communities broadened the base of stakeholders, shared resources, improved sustainability and overcame barriers.

Set Clear, Achievable Shared Goals

Community leaders cited the need to set specific, common goals for successful initiatives. Effective leaders built consensus among multi-sector stakeholders on shared goals and metrics to improve the health outcomes of the children in their community. They also recommended working as a coalition to prioritize competing issues. This was helpful to ensure continued long-term commitment to shared goals among partners.

Engage Families

Strong relationships among children, parents, caregivers and educators were critical to the vitality and success of childhood obesity prevention efforts. Families can play a vital role as part of the interventions in schools, early care and education, out-of-school time programs, and community initiatives. Successful strategies provided convenience for busy families with tight schedules and added value, not just responsibility. This included providing suppers at OST programs or offering classes to provide families with easy practical strategies to improve health. Invested families served as ambassadors to engage other families and community partners. A number of communities also cited the need to bring families in early in the planning process. Parents and caregivers who understand the health benefits of improved nutrition and increased physical activity can model these healthy behaviors for their children.

Integrate Healthy Principles for Sustainability

A common practice was to integrate nutrition and physical activity into existing programs and policies. The integration of nutrition and physical activity into curricula, activities and existing efforts created an environment that supported healthy practices and had a better likelihood of impacting behavior and sustaining change. A few examples included strengthening existing beverage policies, adding nutrition and physical activity lessons to Head Start home visits, building activity breaks into the school day, and improving the walkability of neighborhood destinations.

Improve Cultural Relevance

Successful initiatives framed messages in culturally appropriate ways, integrated cultural beliefs and practices, and created community pride by improving access to the customary foods of those cultures. They used culturally competent language and images, introduced youth to healthy role models, grew traditional foods in gardens, and adapted successful models, such as farm-to-school, to incorporate local, culturally accepted foods. Many communities cited the need to ensure representation from the target population on the advisory group to help adapt interventions to meet the ethnic, cultural and religious needs of a community.

Empower Youth

Engaging youth as decision-makers and advocates and working with youth as partners was a central theme in many communities. Strategies to involve youth included inviting them on wellness councils, developing student advisory committees, allowing them to present at board meetings and building relationships with student organizations, athletic groups and clubs. Many community members cited the benefits of involving youth in program planning and implementation and a willingness of leaders and the community to rally around their young people.

Support Training, Technical Assistance and Networking

Leaders of successful initiatives actively sought opportunities for professional development and networking with other rural providers. Contact with other leaders provided support, inspiration and resource sharing. Increased use of and access to technology, even in remote rural communities, helped promote ongoing communication through email or listservs and through meetings via phone or web-based connections when travel was not possible. Leaders identified training as a necessary strategy to continue to bring in new ideas and to help new partners and stakeholders understand the reasoning behind healthy initiatives.

Tailor Use of Communication Channels

Many communities are beginning to use technology and social media to reach target populations with messaging, event information and health education. The majority of leaders showcased mentioned using Facebook, Twitter, neighborhood listservs and online blogs to communicate with their communities. They also cited the need to tailor communication approaches with the population targeted. While many felt the need to engage in new media approaches, traditional media, such as radio, newspaper articles and hand-delivered flyers, was still heavily used.

Employ Hands-On Learning Techniques

Many initiatives used experiential learning to bring hands-on learning experiences to children and families. This approach of learning-by-doing, provides real-life and practical experiences and helped participants gain knowledge and true experience. Examples included using school gardens to expose children to new fruits and vegetables, and cooking classes to teach science principles.

Use Creative Solutions

The communities employed creative strategies to achieve desired goals. Whether that included redesigning an early care and education center to facilitate indoor play, creating online learning opportunities to overcome travel restrictions, or using a high-school entrepreneurship class to fill the community need for a grocery store, successful communities broke down barriers and weren't afraid to think outside of the box.

Leverage Public and Private Funding

Tight resources were a problem for many communities; however, they approached the challenge with an open mind and leveraged funds from every source possible. Initiative leaders engaged partners from across the community and across the state to achieve their goals. They utilized federal funding sources such as Centers for Disease Control and Prevention grants and Child Nutrition programs, looked to state agencies for grant opportunities, partnered with local entities and reached out to any private funding source available. They were not afraid to ask for the resources necessary to implement their programs.

Share Success to Enable Spread and Scaling

Effective communities began data collection at the front end, documented their progress in real time, monitored their milestones and success and used those results to engage funders and stakeholders. Communities succeeded in showcasing their effectiveness and benefits to the community and were able to demonstrate how those benefits positively impact their partners and stakeholders. This led to reinforcing the activities and, in cases such as the Health Futures Alaska challenge, resulted in the spread and growth of programs and initiatives. Many providers also reported widely sharing, and using, resources, tools and strategies to accelerate success in other communities.

Chapter 3: Early Care and Education

The Role of Early Care and Education in Obesity Prevention

Nearly 12 million infants and young children are in some type of early care and education (ECE) setting, such as Head Start, Pre-K, child care centers and family child care, nationwide.[10] Young children in rural communities also spend more time, on average, in child care than their urban counterparts.[11]

The ECE setting provides a window of opportunity to inspire young children to develop lifelong healthy habits. In an ECE program, providers have the opportunity to introduce concepts of healthy eating by serving nutritious food options and engaging children in nutrition education lessons and daily physical activity. Families see their ECE providers as a source of reliable information about child development and parenting, and they often serve as role models to children and parents.[12]

ECE providers who are committed to taking steps to improve healthy eating and physical activity behaviors among young children must contend with a variety of factors. This may include gaining access to necessary training; providing healthy meals on tight budgets; incorporating strategies for physical activity in what can be harsh climates; and finding ways to engage parents often coming from long days and long commutes. This chapter is intended to help overcome these challenges.

Strategies

Despite the above challenges, ECE providers in rural communities are finding ways to promote healthy lifestyles for children under their care. Below we share a few. To help implement these strategies, please refer to our "Resources" section at the end of the chapter, which links to tools that provide a variety of examples of fun, age-appropriate ideas and games that can be utilized in an ECE environment.

Overarching

- **Develop, implement and evaluate ECE wellness policies consistent with the best practice standards.** A wellness policy is a set of statements around the healthy practices promoted within your program. Your wellness policy at a minimum should set goals and standards for food, beverages, physical activity, screen time and infant feeding. The wellness policy should also include a plan to monitor and evaluate its effectiveness.

  A number of best practice guidelines are available. Select a set of standards based on the goals of your program:

  - *Let's Move! Child Care (LMCC)* is an initiative to promote five key healthy practices in child care settings: physical activity, screen time reduction, food, beverages and infant feeding.
  - *Caring for Our Children, National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs* provides in-depth standards for health, safety and administration of ECE programs as well as standards for nutrition, breastfeeding, physical activity and screen time.
  - *U.S. Department of Agriculture Wellness Policy Resources for Child Care* provides a compilation of national organization and state agency best practices, model policies, and action guides for *Child and Adult Care Food Program (CACFP)* and ECE settings to help providers implement strong policies.

- **Develop and convene ECE wellness councils or include childhood obesity specifically in existing health councils (e.g., Head Start Health Advisory Committees).** Wellness councils provide an opportunity to bring stakeholders and strategic partners to the table to discuss the health and wellness of the children served. Depending on the type of ECE setting, members could include the child care director, head cook or food service provider, parents, teachers, local health professionals, city, town, and county agency representatives and sponsoring organization representatives, local businesses or other key leaders in the community. Wellness councils can help build support for changes early in the process and provide a wide range of perspectives, ideas and approaches to address common goals and **learning objectives.**
- **Take advantage of opportunities for training for teachers, providers, directors and food service staff to incorporate physical activity and healthy eating into all programmatic offerings.** Training gives providers the necessary information and confidence to teach physical activity and healthy eating practices to young children. Opportunities for training in rural areas can be scarce, and attending training may be limited due to time, financial resources and travel distances. Online trainings and social media are a potential venue for sharing ideas and resources in innovative ways. Look to your **state agency,** local CACFP sponsor, **state, regional, and local cooperative extension offices,** and **child care resource and referral agency** for in-person and online trainings. A number of state agency resources outside your own state are typically free and available online to the public as well.
- **Serve as role models for children and parents by exhibiting healthy behaviors.** Whether an in-home or center/school-based provider, one of the most important roles an ECE provider can play is that of a positive, healthy role model. Children who see the adults in their lives eating nutritious foods and enjoying physical exercise are more likely to adopt these habits themselves.[12] Examples of healthy practices that can be modeled include family-style dining (where adults and children eat together and share the same food and beverages), substituting water or low-fat milk for soda or sugary beverages, and participating in classroom and outdoor activities.
- **Engage and educate families about healthy eating and physical activity.** Family engagement in healthy policies and practices should be wrapped into existing programming for parents who often drive long commutes and come in tired from a long day at work. Consider including a healthy cooking demonstration in your next family night, providing grocery shopping lists or installing a healthy living bulletin board at the pick-up location. Using monthly menus and take-home tip sheets to provide healthy recipes are good strategies to get parents and families more involved in the healthy practices of your in-home, center-based or school-based program and to encourage them to reinforce them at home.
- **Consider creative strategies and sources to fund wellness initiatives.** No matter the size of the ECE setting, outside support can be critical to the sustainability of wellness programs and initiatives. Look to state and local health departments, hospitals or clinics, grocery stores, religious organizations, and even banks to assist you. Invite potential funders to participate on ECE wellness committees to achieve buy-in early in the process. **The Rural Assistance Center** also has a wealth of information and resources to help identify funding opportunities, improve grant-writing techniques and a customizable search feature to find funding available for your needs.

Improving Nutrition

- **Provide access to a variety of healthy foods and beverages that are consistent with the best practice recommendations of *Let's Move!* Child Care, the standards of the Child and Adult Care Food Program (CACFP) or Caring for Our Children.** Most children will not notice small changes in their diet, for example switching from whole milk to 1% or skim milk, or from white to whole grain bread. But be prepared — children may reject new foods five to as many as twenty times before accepting them.[13] Consider these steps to encourage healthy eating habits in your in-home, center-based or school-based program:[14, 15, 16, 17]
  - » Offer safe drinking water regularly. Instead of sugary drinks like fruit drinks and soda, quench toddler and preschooler thirst with water, available at all times throughout the day.
  - » Ensure that children ages one to six are limited to 4 to 6 ounces of juice per day, from a cup, including at home. Babies don't need juice at all.
  - » Serve 100 percent juice with no added sweeteners in cups, and only at mealtimes.
  - » Offer either skim or 1 percent pasteurized milk to all children over two years of age, or whole pasteurized milk for children ages one to two.
  - » Serve a variety of fruits and vegetables, at meals and snacks prepared in a variety of forms and child-friendly preparations, such as oranges cut into wedges or carrot sticks with low-fat dip.
  - » Ensure all breads, cereals and pastas served are whole grain.
  - » Opt for heart-healthy lean proteins such as beans, chicken, legumes, and low-fat yogurt or cottage cheese and steer clear of fried foods.
- **Participate in the Child and Adult Care Food Program (CACFP).** CACFP is a federal program to provide aid for child care institutions and family or group day care homes that provide nutritious meals and snacks based on a set of required meal patterns. ECE providers receive financial reimbursement for nutritious meals and snacks offered to infants and children in need. CACFP provides resources to support you as you plan and prepare meals, provide opportunities for active play and encourage children to adopt healthy behaviors. Contact your **state agency** to apply, find a day care home sponsor, locate a facility that participates, and learn more about your state CACFP requirements.

- **Establish gardens and farm-to-preschool programs.** Interactive programs to expose young children to farms and gardens can improve healthy eating behaviors and encourage children to try fruits and vegetables.[18] You do not need a green thumb to start a school garden. Partners can be important allies in implementing sustainable change. Reach out to parents, Cooperative **Extension offices,** local farmers, gardening clubs, **the Farm to Preschool Program** or the **Master Gardener** program for advice, free labor and supplies.
- **Encourage and support breastfeeding.** You can be a powerful champion to help emphasize the importance of breastfeeding for moms and babies under your care. Educate staff about breastfeeding and storing expressed milk. Use expressed milk carefully – be sure none is wasted, and create an inviting, private space for moms to express milk or breastfeed at times that are convenient for them.
- **Encourage families to be involved in menu planning to ensure culturally appropriate and varied foods are offered.** It is important to expose young children to a variety of foods that are delicious, nutritious and safe. When planning menus, honor the food cultures that are represented in your program. Invite parents to share recipes and cooking techniques to encourage understanding and to extend healthy habits to the home.
- **Encourage no food or healthy food celebrations (for example: birthday parties, holiday gatherings).** Keep parties festive and healthy, with an emphasis on fun activities, not food. Provide healthy celebration snack lists to encourage parents to bring in nutritious alternatives or, if you already prepare food or snacks on-site, take the stress off your parents and instead provide a program where they can purchase healthy celebration treats directly from you.

Increasing Physical Activity

- **Provide regular opportunities for physical activity and play consistent with the standards of *Let's Move!* Child Care or Caring for Our Children.** Aim to provide one to two hours of structured (teacher-led) and unstructured (free play) activity every day, including outdoor play whenever possible. Children three years of age and older are encouraged to engage in moderate to vigorous physical activity daily. Rural ECE settings and in-home providers may not have direct access to organized recreation facilities and may have to deal with harsh climates. If this is the case, make use of your indoor space for fun, age-appropriate games and activities (see resources below for ideas). Consider partnering with local community colleges, churches or community centers to make use of their indoor space. When outdoor play is possible, explore and enjoy the great outdoors and all the natural amenities that draw families to rural communities. Just make sure children have weather-appropriate attire and supplies like mittens, rain boots and sunscreen – depending on the climate. Consider partnering with local organizations to help provide these items for children in need.
- **Reduce screen time.** Moderation of screen time, including TV, computers and video games, is key for healthy development and staying active. Aim for no screen time for children under age 2 and no more than 30 minutes a week for young kids during childcare. Also, work with parents and caregivers to ensure that children have no more than one to two hours total of quality screen time per day.
- **Encourage movement, rather than passive participation, in group activities such as circle time, reading and music.** Encouraging kids to jump, wiggle and twist will add activity without extra space or equipment. Action stories or songs in which kids act out the words in a story that you create (e.g., jumping, touching their toes) can be fun, interactive ways to get moving in home-based, center-based or school-based settings. Also, more active participation built into the day will help reduce the time left over for screen time.

Strategies in Action

LAURIE'S INN FAMILY CHILD CARE HOME
CASPER, WYOMING

For the last 15 years, Laurie's Inn has provided a safe, warm and caring home that encourages growth, creativity and learning in a smaller, "family-centered" environment. The program is licensed by the State of Wyoming and achieved **accreditation** from the **National Association of Family Child Care (NAFCC).** Laurie's Inn is also proud to have the first nationally recognized and certified **Nature Explore Classroom** in Wyoming. Even in Casper, Wyoming, a place known for difficult winters and high winds, children attending Laurie's Inn explore nature, learn through gardening, and enjoy a variety of child-centered physical activity opportunities in the outdoor classroom. Every year, families participate in a Garden Day celebration where they bring in plants and seeds to grow in the garden. Families are engaged in the garden activities and leave with healthy recipes and increased knowledge of fruits and vegetables. When the weather turns, the growing continues in a greenhouse and children continue to learn about gardening and nutrition through the **Early Sprouts curriculum.** Laurie's Inn owner, Laura Stadtfeld, works hard to weave nutrition and physical activity into everything they do at Laurie's Inn and she works outside the Inn to share her way of life with other family child care providers in her community.

STEPPING STONES CHILD CARE
MANSFIELD, PENNSYLVANIA

In Tioga County, the winter can be long and often very cold. Stepping Stones Preschool must spend many days inside because of harsh winds and low temperatures. To overcome this barrier, Stepping Stones set out to identify indoor play strategies to keep kids moving when going outside is not an option. They purchased inexpensive equipment such as soft balls, a classroom basketball hoop, an indoor hopscotch board, a daily fitness CD set, and tunnels to weave under classroom tables and chairs. Then they altered the daily schedule to make room for the new indoor play set-up. As a result, every morning (rain or shine) children start the day with a circle time song. While the children are singing and dancing, preschool staff quickly change the classroom into an active environment by distributing the play equipment throughout the room. After some training to the staff and children on safe use of the new equipment, the program has gone off without a hitch. Now, when the weather is uncooperative, all children are active inside for at least an hour a day.

MADERA COUNTY HEAD START
CALIFORNIA

A staggering 44 percent of children in Madera County, which is part of the Central Valley in California, are obese or overweight. To address this, the Madera County Public Health Department joined the *Let's Move!* Child Care Initiative and began providing exclusively healthy beverages to the children under their care. Madera County is one of the 12 funded counties participating in CA4Health, a Centers for Disease Control and Prevention (CDC) funded Community Transformation Grant (CTG) initiative, working to improve the beverage environment in various settings. A collaborative effort between the health department, CA4Health, Community Action Partnership of Madera County, and California Project LEAN made the development and implementation of healthier beverage standards a possibility. As a result, Head Start Centers in four Central Valley counties have implemented healthier beverage standards where 1,500 children ages five and under now drink water and unflavored milk (breast milk and infant formula for those up to 12 months) instead of soda, sports drinks, juice and juice drinks, and chocolate or other flavored milk. This is the type of policy that ECE providers in many rural areas across the country can consider putting into place.

COOPERATIVE EDUCATIONAL SERVICE AGENCY #11 (CESA 11) HEAD START
TURTLE LAKE, WISCONSIN

CESA #11 provides a home-based Early Head Start program serving 210 families with pregnant women, infants and children under age 3. Families receive weekly home visits and two center-based socialization opportunities each month. Using funds received from a Wisconsin CACFP Child Care Wellness Grant, CESA 11 created a curriculum based on the Healthy Bites and Active Play resources to bring activity and healthy eating to weekly home visits. The team developed wellness activity kits that include a nutrition and physical activity component designed to meet the needs and educational goals of each family involved. Home Visit "Snack Packs" and "Activity Packs" include everything necessary for home visit coordinators to conduct a nutrition or movement activity and to provide a healthy snack – down to the knife and cutting board. All packs include a theme such as "Water Is Good," "Creating a Rainbow on My Plate," or "Where Do Fruits and Vegetables Come From?" along with a quick reference sheet for coordinators containing instructions on how to conduct the activity. By incorporating healthy eating and physical activity into an existing program structure, CESA #11 is overcoming long travel distances and encouraging healthy habits for the entire family.

DISTANCE EDUCATION AND COMMUNICATION
MAINE CACFP

Maine is a rural state, and travel for training can be difficult and cost-prohibitive. When the state received a CACFP Child Care Wellness Grant in 2010, they requested sub-grantees use funding in innovative ways to develop distance education programs. The outcome of this request is bringing ECE into the 21st century by using the Internet and social media to share training and resources. **Catholic Charities** created You Tube videos on physical activity. **Penquis Community Action Program** developed online trainings on gardening, summer and winter activities, and nutrition. The Aroostook Community Action Program started the **"CTG Central" Facebook page** for the ECE community to share resources, activities and evaluations. The Maine Department of Health and Human Services is overcoming challenges with high-tech solutions that are now available online, and free to ECE providers everywhere.

Initiatives Successfully Implemented in Rural Settings

- *Let's Move!* Child Care Initiative
  - » *Let's Move!* Child Care Success Stories
- Color Me Healthy Curriculum
- I am Moving, I am Learning
- Leap of Taste: West Virginia Child Care Standards Implementation Guide
- Active Early and Healthy Bites: Wisconsin Physical Activity & Nutrition Resource Guides

Additional Resources and Tools

- First Years in the First State: Improving Nutrition and Physical Activity Quality in Delaware Child Care
- Healthy Habits for Life Child Care Resource Kit
- National Resource Center for Health and Safety in Child Care and Early Education Licensing Toolkits
- Child Care Aware Training Academy
- National Training Institute for Child Care Health Consultants
- CACFP Wellness Resources for Child Care Providers
- Recipes for Healthy Kids: Cookbook for Child Care Centers and Schools
- Recipes for Healthy Kids: Cookbook for Homes
- USDA's Team Nutrition Resource Library
  - » Nutrition and Wellness Tips for Young Children: Provider Handbook for the Child and Adult Food Program
- Nutrition and Physical Activity Self Assessment for Child Care (NAPSACC)
  - » PA NAP SACC Promising Practices: Manual and Videos
- EatPlayGrow Curriculum
- Best Practices for Physical Activity: A Guide to Help Children Grow Up Healthy
- Playground Safety Tips
- Creating Safe Play Areas on Farms
- 101 Tips for Increasing Physical Activity in Early Childhood
- California Project LEAN Beverage Standards for Children 0-5
- National Food Service Management Institute (NFSMI)

Rural Community Spotlight

MACON CHILD DEVELOPMENT CENTER
MACON, MISSOURI

Community Child Development Center (CCDC) was created to fill a community need for quality child care in the Macon area. A common issue facing rural communities is that very few child care options are available to families, and even fewer provide quality care. A group of concerned citizens met to develop a solution, and in 2005 Community Child Development Center, Inc. was formed. When a longtime friend asked Tricia Knowles to run the facility, Knowles couldn't believe it was possible to raise the million dollars necessary to make the center a reality — but they did.

Over the next three years, the community raised funds through grants, tax credits and donations to finance the program. A building was purchased with a Community Block Grant, and a Neighborhood Assistance Program Grant was approved for renovations and materials. A state-of-the-art playground was created with the assistance of a Mark Twain Solid Waste Grant. "Every civic group in town came to set the place up," Knowles remembers. "They opened boxes and put equipment together. We have amazing community support!" The center opened its doors in Fall 2008, serving 50 children.

The Board of Directors agreed that quality was the number one priority for the CCDC, including nutrition. They applied for **Missouri's Eat Smart Certification** to support this mission. Children began to receive whole grain breads, more fresh fruits and vegetables, and the center took the plunge into family-style dining — a best practice supported by research. Some were reluctant to allow younger children to serve themselves, but now the staff believes the change has been worthwhile. The children learn and practice social skills and play a more active role in the meal experience. Children, as young as 20 months, take their dishes to the basin when they finish a meal. Knowles recommends other child care professionals interested in implementing family-style dining, "Come up with a process the staff is willing to implement, and then be consistent." She insists it will work.

The implementation of the Eat Smart Guidelines has contributed to a slight increase in food cost for the facility, but the Board has decided it's worth it. Knowles works with a local vendor and shops in neighboring towns, as far as an hour away, to find the best prices and selection.

With so few child care facilities in town, one challenge for the center was to find trainings on new initiatives like family-style dining, or to even observe it in action. To overcome this challenge, Knowles relies heavily on online education for herself and her staff. She also partners with the local extension office and county health department to provide training on nutrition and food safety.

Another difficult transition was the elimination of outside treats for parties. To continue to honor the festive spirit in a healthy way, CCDC hosts a birthday celebration once per month, and parents can bring in nonfood items, like pencils and stickers.

Knowles acknowledges being rural can have its challenges. However, being rural can be an asset, as well. This close-knit community continues to come together in support of the Center. When CCDC wanted to start a school garden, they won a grant to purchase a neighboring lot, and the nearby Truman State University (TSU) and Master Gardeners club helped get them started. Students from the TSU Agriculture Science program continue to help tend and care for the garden. Knowles is proud of her rural roots. "There are advantages to being in a community for a long time, you know a lot of things, and you know a lot of people."

Chapter 4: Schools

The Role of Schools in Obesity Prevention

As the cornerstone of the rural community, schools are an important venue for childhood obesity prevention efforts. Children spend over 1,000 hours annually and consume up to 50 percent of their calories in school.[19] Research has shown that well-designed, well-implemented school programs can effectively promote physical activity, healthy eating and reductions in television viewing time.[20] Engaging families in your efforts is also essential to ensure positive school outcomes, both in academic performance and in obesity prevention efforts.[21]

Rural schools and students may face numerous location-related challenges, such as limited funding,[22, 23] declining student populations and school consolidations,[24] and long commutes and bus rides to school.[25, 26] However, rural schools also have a number of assets that can be leveraged to support obesity prevention efforts. These include strong school-community collaboration, family engagement, intergenerational relationships among community members, less bureaucracy and organizational complexity, and lower student-teacher ratios than in metropolitan areas.[27]

Strategies

Below we share a few strategies to help schools and school districts improve nutrition and increase physical activity. To help implement these strategies, please refer to our "Resources" section at the end of the chapter, which links to tools and resources that can be utilized in the school environment.

Overarching

- **Develop, implement and evaluate school wellness policies consistent with best practice standards.** A wellness policy, such as the Local School Wellness Policy (LSWP), is a set of statements around the healthy practices promoted within your program. School districts participating in the National School Lunch Program are required to develop a wellness policy that is made publically available and contains, at a minimum, nutrition practices, nutrition education, physical activity and an evaluation plan. LSWPs provide an opportunity to engage and educate youth about healthy choices. They are an important tool for parents and families, students and school districts in promoting student wellness and ensuring nutrition guidelines meet the minimum federal school meal standards.

  The following best practice guidelines will assist school districts to improve nutrition, physical activity and the broader school environment through the development and implementation of a wellness policy.

  - **U. S. Department of Agriculture National School Lunch Program and Smart Snacks in School regulations**
    - **HealthierUS Schools Challenge**
  - **Center for Disease Control and Prevention School Health Guidelines to Promote Healthy Eating and Physical Activity**
  - **Alliance for a Healthier Generation Healthy Schools Program**

- **Develop and convene school health and wellness councils that engage youth and families.** The school health and wellness council is an action-oriented group that makes the implementation of the district wellness policy and other health-related initiatives possible. A council can be formed at the district level or school building level and should include school nutrition staff, teachers, administrators, students, parents/families and others who are committed and interested in making the school environment healthier, such as local businesses, health professionals, the health department and Cooperative Extension. Be sure to engage students in changes to the school environment. By being involved in every step of the process, students can become authentic leaders of the movement. Also, in a small community, it is not uncommon to have long-standing and personal relationships among school stakeholders. While this is an advantage for obesity prevention efforts where collaboration is necessary for success, long-standing personal relationships must be respected. Making changes gradually can help overcome controversial issues, reduce conflict and support sustainability in the long run.

- **Train teachers, administrators, school staff, food service directors and food service staff to incorporate physical activity and healthy eating into all programmatic offerings.** Staff training and professional development are essential to creating an environment that encourages healthy habits. Common barriers to training in rural areas are isolation from other similar professionals, lack of opportunities and limited funding. Look to national professional organizations such as the **School Nutrition Association, USDA Team Nutrition, Alliance for a Healthier Generation, National Association for Sport and Physical Education,** or the **American Alliance for Health, Physical Education, Recreation and Dance** and their state affiliates for networking, resources, webinars and on-demand online trainings. Also look for federal and state funding opportunities, such as the CDC Community Prevention Grants and **State Public Health Actions to Prevent and Control Diabetes, Heart Disease, Obesity and Associated Risk Factors and Promote School Health,** that can be used to help schools in obesity prevention training efforts. You may want to consider training at least two staff members simultaneously to ensure sustainability of policies and practices. Providing suggestions for healthy lesson plans, such as **Serving Up My Plate, A Yummy Curriculum,** is an additional way to support staff as they work to incorporate nutrition and physical activity into daily activities.
- **Encourage and show school staff how to serve as role models for children and their families by supporting staff wellness.** Some research shows that children's food choices and participation in physical activities are influenced by social factors such as parents and role models.[28, 29] Encourage staff members to purchase school meals, join students for meals and snacks, avoid consuming personal food or beverages in front of children that are not consistent with the school wellness policy, and lead and participate in active play. School-wide wellness initiatives such as a "Walk Across America" or an **indoor fitness trail** can motivate students and school staff members.
- **Engage families in healthy eating and physical activity education and programming.** Rural schools are often seen as the center of a rural community. School functions and sporting events serve as a central location for families to socialize. Incorporate wellness initiatives in events that families are likely to attend, such as including physical activity into PTA nights and offering healthy fare at concession stands. Leverage a school website, school meal menus, and backpack brochures, in addition to healthy tip sheets and health promotion workshops, to communicate the importance of nutrition and physical activity to families. Also consider reaching out to scouting troop leaders and 4-H volunteer leaders to identify ideas to incorporate programs on nutrition and physical activity into local school programming and events.
- **Consider creative strategies and sources to fund wellness initiatives.** As the hub of the community, schools are well suited to benefit from local funding for wellness programs. Look to state and local health departments, hospitals or clinics, grocery stores, religious organizations, and even banks to assist you. Invite potential funders to participate on local school wellness committees to achieve buy-in early in the process. The Rural Assistance Center also has a wealth of information and resources to help identify funding opportunities, improve grant-writing techniques and a customizable search feature to find funding available for your needs.

Improving Nutrition

- **Ensure foods and beverages sold and served in schools, including those offered in meals, a la carte, vending, school stores, classroom celebrations and fundraisers, meet or exceed federal and state nutrition standards and promote healthy eating.** This sends a consistent message to students that good nutrition is a priority. Promoting fruits and vegetables in the cafeterias while selling candy bars in the hallway undermines your efforts. Consider all the places foods are sold and served in your schools and set goals for areas that need improvement. Develop student surveys, host focus groups and provide taste tests to involve students in the process of selecting the healthy foods. Use the students on the Wellness Council as your school food ambassadors to help spread the message that all foods sold in school are healthy and delicious.

- **Participate in the U.S. Department of Agriculture (USDA) National School Lunch Program (NSLP), School Breakfast Program (SBP), the Summer Food Service Program (SFSP) and the Fresh Fruit and Vegetable Program (FFVP).** The USDA recently updated nutrition standards for school lunch and school breakfast; updated standards for all other food sold on the school campus are coming soon. The standards for school meals and snacks offer more fruits and vegetables, lower-fat dairy, leaner proteins, more whole grains and adequate amounts of calories. Participation in all federal child nutrition programs will provide your program with additional reimbursements for healthy meals and snacks. Talk with local businesses and distributors about changes to the meal pattern, such as your need for more fruits and vegetables and more whole grain items. They may be able to help you identify new products or sales on seasonal produce items.
- **Identify creative ways to purchase healthy foods, including local sourcing, purchasing cooperatives and group purchasing organizations.** Rural communities may not always have access to healthy foods at affordable prices. Many school districts are banding together to form purchasing cooperatives. By working together in a cooperative, districts can leverage their collective buying power to purchase food and supplies at significantly less cost for all participants. Talk with neighboring school districts, restaurants, hospitals and long-term care facilities about joining together to develop a master bid list of products. It may be challenging at first to agree on the same products; however, the end result can improve buying power, improve quality of products available and result in better pricing.
- **Establish gardens and farm-to-school programs.** Farm-to-school programs are a growing trend among schools looking for new ways to introduce students to healthy eating by showing them how food is grown, cared for, prepared and eaten. School gardens also provide opportunities for hands-on learning and nutrition education and can be incorporated into a curriculum and lesson plans. Establishing partnerships with local farmers, gardeners, manufacturers, distributors, producers and processors can help provide more access to high quality fruits, vegetables and other healthy food products while supporting the local economy. Partnerships with local service organizations, Boy and Girl Scout troops and 4-H chapters can supply the necessary volunteers to plant and maintain school gardens. Don't be afraid to think outside the box about local food sourcing. If fresh fruits and vegetables are out of season, but fresh fish are readily available in your community, consider developing a fish-to-school program.

Increasing Physical Activity

- **Provide regular opportunities for physical activity, including recess and time outside, whenever possible.** Physical activity and recess in school are critical to help students improve motor skills and to reinforce active lifestyles. Build requirements for physical activity into the school wellness policy. When schedules and resources are tight, look for creative ways to add physical activity to daily routines. Allow students to select activities outside scheduled classroom time, such as opening the gym at lunch, or more organized, structured activities such as relay races and jump roping contests before and after school. Do not use physical activity as a punishment. Consider using extra recess minutes or passes to local community recreation centers as an incentive. Also try in-class activity breaks like JAMmin' Minute® and GoNoodle or incorporating physical activity into lesson plans like counting jumping jacks to keep kids moving throughout the day.

- **Ensure that students actively participate in a required amount of high quality physical education each week, following a curriculum consistent with national or state physical education requirements.** School-based physical education (PE) increases students' level of physical activity and improves physical fitness.[30] The National Association for Sport and Physical Education and the American Heart Association recommend that all elementary school students should participate in at least 150 minutes per week of physical education, and all middle and high school students should participate in at least 225 minutes of physical education per week, for the entire school year. Consider utilizing SPARK (Sports, Play, and Active Recreation for Kids), a research-based PE program that has been used successfully in rural communities. The website offers free resources such as lesson plans and a grant finder to help you fund the full program in your school. In addition, consider using the Physical Education Curriculum Analysis Tool (PECAT) to conduct clear, complete and consistent analyses of PE curricula, based upon national PE standards.

- **Implement shared-use agreements and open school facilities before and after school for use by students, staff and the community.** Providing access to community resources like school gyms, parks and playgrounds offers maximum usage to the often limited places for physical activity in a rural community. Increased use of school facilities for physical activity also encourages families to be more physically active together.

Strategies in Action

BISMARCK SCHOOL DISTRICT
BISMARCK, ARKANSAS

Arkansas Act 1220 of 2003 to Reduce Childhood Obesity required schools to limit access to and improve the nutritional quality of foods found in vending machines and to increase physical activity in schools. The Bismarck School District, with one K-12 campus and just over 1,000 students, was faced with an uphill battle to explain the changes to parents and families. However, armed with a supportive administration and a state law, they weathered the bumps in the road and pressed forward. The district reduced fried foods, increased offerings of fruits and vegetables, and added whole grains to recipes. Nine years later, Bismarck has achieved full implementation of USDA's new updated school meal standards ahead of schedule. One key to the district's success is the **Fresh Fruit and Vegetable Program (FFVP),** which offers free fruit and vegetable snacks to children in low-income schools. The FFVP in Bismarck increases students' willingness to try new fruits and vegetables, and that willingness carries over into the cafeteria. The second key is the farm-to-school program. The district partners with a local farm that supplies produce to the high-end restaurants in Little Rock. Students receive gourmet salads with nine different varieties of lettuce, and Bismarck cooks take pride in the fact that they offer the best salads and meals in town.

No Limits to Local Sourcing

In Kodiak, Alaska, farm-to-school looks a little different. In addition to a traditional farm-to-school program, the Kodiak Island Borough School District (KIBSD) has introduced Fish 2 School, to bring healthy, wild Alaskan fish to school lunches in the district. A local coalition, **Healthy Tomorrows,** also hosts a Chef 2 School program that brings chefs into schools to discuss the health and local economic benefits of eating fresh fish. Kodiak has proven that, with community support, many local healthy food items could be added to school meals.

CIRCLE OF NATIONS SCHOOL
WAHPETON, NORTH DAKOTA

Circle of Nations is an inter-tribal, off-reservation boarding school serving Native American youth in grades 4 through 8. Recognizing the health risks for the Native American populations, *Circle of Nations* began implementing diabetes education and prevention programming 20 years ago. Around that time, members of the school staff began attending the South Dakota Coordinated School Health Leadership Institute. Even though the conference was three hours away, the training was critical to helping staff understand the link between nutrition, health and academic performance. Fast-forward to today — *Circle of Nations* has been recognized by the U.S. Department of Agriculture with a **HealthierUS** Gold Award and the U.S. Department of Education as a **Green Ribbon** School. They are also working with the White House through **Let's Move Indian Country.** Candy and soda are a thing of the past. Student "Garden Warriors" support a school garden filled with tribal heirloom fruits and vegetables. They are implementing the SPARK nutrition and physical activity curriculum. And a new program called "Health Heroes" brings in Native American healthy role models, like boxer Shawn "The Sioux Warrior" Hawk, to talk with students about the importance of wellness. Nutrition and physical activity are integrated into nearly every activity and initiative at the school. Healthy living is the way of life.

SCHOOL DISTRICT OF PERQUIMANS COUNTY SCHOOLS, HERTFORD, NORTH CAROLINA

As a small district of 1,800 students in rural northeastern North Carolina, the Perquimans County child nutrition program was at the mercy of one major food distributor's pricing because no other distributor would deliver to the district. When they were invited to join a statewide procurement alliance, they immediately seized the opportunity. In 2009, the **North Carolina Procurement Alliance** (NCPA) was formed, with the expectation that about 20 districts across the state would join – 78 signed on. In 2013, the voluntary Alliance is 113 districts strong. The NCPA works through a member-elected Board of Directors to develop consolidated bid product specifications for 900+ foods and supplies. The Board of Directors works together to conduct product testing, audits, menu development and quality control for all the districts in the Alliance. Increasing the total volume of product purchases by using the same bid specification documents across the state creates huge cost savings and levels the playing field for all districts. Small districts, like Perquimans, now benefit from strong bid specifications for high quality products at the same price that a large urban district would be able to negotiate. Alliance members share a comradery, resources, leadership opportunities and professional development that membership in such a large group provides. Talk with neighboring districts, regions, and even your state agency, to see if a purchasing cooperative, buying group or procurement alliance could be a possibility for your district.

HEALTHY FUTURES ALASKA

Healthy Futures is a grassroots organization that was founded in 2003 by two Alaska parents concerned about the health of Alaska's children. And for good reason — in Alaska, 41 percent of young children are overweight before they even enter kindergarten. In fall 2011, the Alaska Department of Health and Social Services (DHSS) began a partnership with *Healthy Futures* to empower Alaska's youth, statewide, to engage in daily physical activity. Together with other state and local partners, Alaska DHSS works with *Healthy Futures* to help implement the school-based social support program called the *Healthy Futures* Physical Activity Challenge. Twice per year, participating elementary schools challenge students to record their physical activities on simple log forms, turn those forms in at school, and win prizes for being active. While relatively simple in nature, Challenge participation spread quickly. Before *Healthy Futures* partnered with DHSS, in 2011, 36 schools and 1,300 children participated. Just two years later, 148 schools and over 15,000 children are participating — that's more than 20 percent of Alaska elementary school children. *Healthy Futures* and the Alaska DHSS know that a successful community-wide campaign must entail community involvement. Their success would not be possible without partners who extend their reach, a team of people and programs reinforcing the same message, and events that promote the desired behavior change. As Alaska has demonstrated, *Healthy Futures* is a scalable program that gets kids excited about being active and can be adapted to other rural communities, starting at the school level, and potentially spreading to the district and state levels.

WOOD COUNTY WISCONSIN

In Wood County, 64 percent of adults and 34 percent of third graders are overweight or obese. The county is tackling obesity head-on through the *Get Active Wood County* public awareness campaign. The initiative's tagline — *"Cause. Community. Change."* — highlights the need to build community support around efforts to improve nutrition and increase physical activity. Wood County school districts have integrated nutrition and physical activity-based curricula into the classroom. For example, fourth graders at 10 elementary schools have the opportunity to participate in Fit-Tastic — an afterschool program to help children develop healthier eating and physical activity habits. Six school districts are developing farm-to-school programs by connecting local farmers to school nutrition directors, coordinating food service staff trainings, and providing students with taste testings and nutrition education. To improve opportunities for physical activity, the Wisconsin Rapids Public School District has begun to open its gyms, classrooms and fields to the community when school is not in session. The *Get Active Wood County* coalition of local businesses, schools and nonprofit organizations is working together to create a healthier Wood County for all.

Initiatives Successfully Implemented in Rural Settings

- Rural Obesity Prevention Toolkit: Models for Schools
- Body Quest: Food of the Warrior, Alabama Cooperative Extension
- SPARK (Sports, Play, and Active Recreation for Kids) Curriculum
- Safe Routes to School, Iowa Department of Transportation
  - » Webinar on SRTS in Rural Communities, National Center for Safe Routes to Schools
- CATCH (Coordinated Approach to Child Health) program
- Alliance for a Healthier Generation Healthy Schools Program (Membership to the Alliance Healthy Schools Program is free, but required for access)

Additional Tools and Resources

- The School Day Just Got Healthier, U.S. Department of Agriculture
- USDA Team Nutrition
- Recipes for Healthy Kids: Cookbook for Child Care Centers and Schools
- Alliance for a Healthier Generation Resources and Tools (Membership to the Alliance Healthy Schools Program is free, but required for access)
- School Health Guidelines to Promote Healthy Eating and Physical Activity
- School Health Index
- Youth Physical Activity Guidelines Toolkit
- Strategies to Improve the Quality of Physical Education
- Presidential Youth Fitness Program
- Let's Move Active Schools
  - » Let's Move Resources and Grants
- National Farm-to-School Network
- Culinary Techniques for Healthy School Meals, National Food Service Management Institute
- School Nutrition Procurement Toolkit, School Nutrition Association
- Model Joint Use Agreement Resources, ChangeLab Solutions
- I-Walk: Iowans Walking Assessment Logistics Kit, Iowa Department of Public Health,
- National Association of School Nurses Childhood Obesity Toolkit
- Body Mass Index Assessment School Nurse Toolkit, Iowa Department of Public Health
- Safe Routes to School Education Resources (lesson plans, training programs and webinars), Mississippi Department of Transportation
- California Project LEAN Parents in Action Guide and Lesson Plan
- School Employee Wellness Guide
- Let's Go LinCo!

Rural Community Spotlight

Lincoln County, Washington, is the kind of place where people meet up to talk business at the local post office or high school basketball game. "People work together, and we have no problem getting buy-in," explains Ed Dzedzy, Administrator for the Lincoln County Health Department. In 2005, the health department decided to focus on the issue of childhood obesity.

Realizing their childhood obesity problem mirrored that of the nation, they joined **Collaborate for a Healthy Weight,** a national initiative bringing together primary care providers, public health professionals and leaders of community-based organizations to implement strategies to reverse the obesity epidemic. In partnership, the Lincoln County Health Department, Davenport School District and Lincoln Hospital District formed the *Let's Go LinCo!* Initiative to create a countywide environment that fosters healthy lifestyle choices and behaviors.

Within the education sector, they began Body Mass Index (BMI) surveillance in elementary schools in three school districts in 2005, expanded to five school districts in 2007, and by 2010 were collecting student BMI in all eight public school districts serving Lincoln County. Additionally, in the Davenport School District, kitchen staff received **Cooks for America Culinary Boot Camp training,** menus were revamped to a made-from-scratch model, and processed foods were phased out of school meals. As a result of the community response, the city of Davenport has appointed a wellness coordinator.

Within the health care sector, the Lincoln Hospital District worked with its clinics to enhance their electronic health records with wellness plans encouraging body mass index (BMI) charting and counseling by health providers. What started with a grant from the National Initiative for Children's Healthcare Quality (NICHQ), with funding from the federal Health Resources and Services Administration, has blossomed into a movement.

Through the **Healthy Weight Learning Collaboratives,** Lincoln County focused on developing a unified health message for the whole community. Dzedzy and his team created the *"5, 4, 3, 2, 1 Let's Go LinCo"* campaign to teach about five daily health behaviors, including eating fruits and vegetables, drinking water and low-fat dairy, limiting screen time and engaging in regular physical activity. The program is visible in every corner of the community, from in-school programming, to signs in clinics and county offices. It's not surprising to see cars in the community with window-clings supporting the initiative.

Dzedzy is quick to point out, "Rome wasn't built in a day!" Changes like these take time, but Lincoln County has the strength and the community network to make it happen. "Things are different here. We worked with our community. We developed partnerships with our businesses, with our local government, with our clinics. And schools are the focal point — anything that's anything is going to go through the school." Dzedzy stresses that you must understand your community and its points of leverage and leadership to achieve success.

Chapter 5: Out-of-School Time

The Role of Out-of-School Time in Obesity Prevention

Out-of-school time (OST) programs encompass a wide range of offerings for young people that take place before school, after school, on weekends, and during the summer and other school breaks.[31] OST programming provides opportunities for positive youth development through high quality academic, wellness and enrichment programs, sponsored by a wide variety of organizations, including schools, community- and faith-based organizations, libraries, museums, municipalities, youth-serving organizations, and volunteer groups.[32]

In the U.S., 6.5 million children attend out-of-school time programs annually, participating in roughly three hours per day of activities such as homework, snack and gross motor play.[33] With so many youth participating in these programs, the out-of-school time setting is a key component to helping combat childhood obesity in communities. Out-of-school time programs that incorporate nutrition and physical activities promote health, teach youth positive values, and impart knowledge and skills to help establish lifelong healthy habits.[34]

In rural areas where resources are limited, children participating in out-of-school time activities often face transportation challenges, fewer program options, potential issues with weather and climate, and difficulty affording program fees.[35] Programs may struggle to identify funding, engage parents, recruit participants and locate programs in areas convenient for schools, students and parents. However, with vision and collaboration, out-of-school programs can offer an effective and affordable way of overcoming obstacles confronting rural communities and help children realize their full potential.

Strategies

Educating children on good nutrition and appropriate physical activity are critical to preventing obesity and its associated health conditions. When out-of-school time programs can provide healthy food and physical activity choices, they can be an important component of the campaign against childhood obesity.[34] Below we share a few strategies to help out-of-school programs improve nutrition and increase physical activity. To help implement these strategies, please refer to our "Resources" section at the end of the chapter, which links to tools and resources you can utilize in your program.

Overarching

- **Develop, implement, and evaluate out-of-school time wellness policies consistent with the National Afterschool Association Standards for Healthy Eating and Physical Activity in Out-of-School Time Programs and the YMCA Healthy Eating and Physical Activity Standards for Early Childhood and Afterschool Programs, which are complementary.** A wellness policy is a set of statements around the healthy practices promoted within your program. Developing a wellness policy can provide the framework to set goals and implement changes to improve the health of the children you serve. To build support for your policy from the start, convene families, youth, school, local business and community leaders together to develop the policy and implementation plan collaboratively. Invite stakeholders who may be able to solve problems down the road, such as the local transit agency or local charitable organizations. Individuals with a vested interest may be more willing to help you find a way to transport children home or offset some costs of the program, for example.
- **Provide training to program and food service staff to lead activity sessions, prepare healthy food options, and model positive eating and activity behaviors.** Staff should regularly participate in learning about healthy eating, healthy menus and strategies to promote physical activity. Out-of-school time providers play an essential role in influencing and empowering youth to make healthy choices. Ask your local health departments, cooperative extension, PTA/PTOs, and existing youth organizations such as 4-H, YMCA, Girl Scouts, Boy Scouts, or Boys and Girls Club to give a presentation and share expertise. Implement a train-the-trainer program, where one staff member attends training and brings the information back to the remaining staff. Webinars and online trainings, from organizations such as the **Alliance for a Healthier Generation, CATCH** and **SPARK,** are another viable option for rural providers who may not be able to travel long distances to attend trainings.
- **Educate families about healthy eating and physical activity programs.** Outreach to parents can occur in a number of ways, such as home visits, newsletters, electronic communication (i.e., email, text, phone, websites), having staff spend time in community gathering spots like local school sporting events, or involving parents in program delivery such as family cooking classes. Developing family advisory groups or hosting activities when parents may already be at school, such as parent-teacher conference nights, or back-to-school open houses, can be another strategy to connect. However, providers must be sensitive to work schedules, and possibly seasonal responsibilities of the industries that employ families in the community.

- **Implement creative solutions to transportation challenges.** In rural settings, where destinations can be spread across several miles, walking and biking to get places may not be realistic options. Working with the local school district to locate out-of-school time programming on school grounds can reduce the amount of outside transportation required and help consolidate transportation needs for afterschool sports and other activities occurring in the school. Consider working with local partners and civic groups to help with funding for late school buses or organizing volunteers. Local religious organizations may be able to provide a van for transportation, and parent groups may be willing to organize car pools. Involve your local, regional or state transportation authority in planning committees and wellness councils to identify solutions to give youth safe, affordable and convenient ways to access OST opportunities in their communities.[36]

Improving Nutrition

- **Provide access to a variety of healthy foods and beverages.** Emphasize nutritious choices like whole grains and healthy beverages such as water, unflavored 1% or skim milk, and no more than 8 ounces of 100 percent juice with no added sugar. Serve a fruit or vegetable daily (fresh, frozen, canned or dried without added sugar). Avoid sweet baked goods, candy, fried foods and fried salty snacks. Involve students in menu planning to teach them about healthy food choices. Out-of-school time programs provide the perfect opportunity to engage kids in **fun, hands-on nutrition education activities,** such as healthy cooking. Lots of "no-bake" **recipes** are available to try if you do not have access to a kitchen. Implementing a garden as part of your program could help supply fresh garden produce and help you introduce new fruits and vegetables.
- **Participate in the U.S. Department of Agriculture National School Lunch Program (NSLP), Child and Adult Food Care Program (CACFP), and the Summer Food Service Program (SFSP).** The NSLP, CACFP or SFSP can support your efforts to provide youth with healthy meals and snacks. The addition of an afterschool meal to your program, through CACFP or SFSP, may also help support families coming in late from long work hours, attract more kids to afterschool programs, and create opportunities for community building.[37]

Increasing Physical Activity

- **Provide opportunities for physical activity and play, including outside whenever possible.** Dedicate at least 30-45 minutes of a morning or afterschool program time to physical activity. Encourage moderate to vigorous physical activities the majority of that time, and consider using a physical activity curriculum designed for OST programs. Some available curricula include **SPARK** and **CATCH Kids Club.** Do not permit access to television or movies, and limit digital device time to homework or devices/programs that actively engage children in moderate to intense physical activity. In many locations, strategies for indoor physical activity are necessary due to inclement weather conditions at certain times of the year. Evaluate the indoor facilities nearby. This could be a multipurpose room at the school or at the YMCA, or a gymnasium at the local community college. Once those opportunities are identified, consider implementing a **shared-use agreement,** which would allow your out-of-school time program to utilize both school district and community facilities.

Strategies in Action

ARIZONA 4-H HEALTHY LIVING AMBASSADORS
COCHISE COUNTY, ARIZONA

The University of Arizona 4-H Youth Development Program provides quality youth education by building positive relationships and life skills. In 2012, Arizona 4-H was selected to partner with United Healthcare in their national initiative, *Eat4-Health*. Through *Eat4-Health,* Arizona 4-H is activating 4-H youth ambassadors to make healthy choices for themselves and encourage friends, families and people in their communities to make positive changes through training, creative programs and educational events. Since the start of the initiative, Arizona Cooperative Extension has trained 107 teens to teach nutrition, culinary and gardening skills to youth and been invited to visit the Tucson Village Farm, a seed-to-table farm program designed to reconnect young people to a healthy food system. In the border town of Douglas, Arizona, where nearly half of the community residents live at 200 percent below the poverty line, seven youth have been given the opportunity to participate. In just the first two years, these teens have contributed more than 800 hours of community service giving healthy living presentations, hosting bicycle giveaways and providing free afterschool care in the summer months. In total, the youth have touched 5,500 individuals both in and out of the community. Not only do these teens learn how to make healthy changes in their own lives, but they also gain confidence and leadership skills that allow them to be positive mentors to younger children in the community. Cochise County 4-H is also working to improve the sustainability of a community garden and start a bicycle library where community members can check out bicycles with credits earned by doing community service. The youth ambassadors are just the catalyst this community needs to improve the health of all children living in Douglas.

WORLD VISION APPALACHIA
BARBOUR COUNTY, WEST VIRGINIA

Barbour County is an area of very concentrated generational poverty, and food insecurity is a major concern. To address these issues, World Vision, a humanitarian organization dedicated to working with children, families and their communities, operates KidREACH, a free afterschool program focused on improving educational outcomes for children through a one-on-one mentoring relationship. The motto for KidREACH is to reach kids through Relating, Educating, And Communicating Hope, and the afterschool program goes beyond a program for youth; it's a gathering place for families. KidREACH provides support and enrichment for families throughout the year through classes on healthy cooking, stretching your food dollar, and financial literacy, as well as connecting families with community services. They also provide afterschool suppers to ease the daily burden on families. KidREACH works with a local coalition to build a community garden and establish a youth empowerment program to teach youth how to affect change in their community. Collaboration is key to the success of World Vision Appalachia.

GIRLS ON THE RUN OF NORTHWEST ARKANSAS
LINCOLN CONSOLIDATED SCHOOL DISTRICT

Girls on the Run (GOTR) is an afterschool program that encourages girls in third to fifth grade to build self-esteem and healthy lifestyles through running and walking. A community member coach guides the girls through a 10- to 12-week curriculum that includes activities such as running, walking, playing games and group discussion of developmental and lifestyle issues such as bullying, self worth and goal setting. During the program, girls are empowered with a greater self-awareness, a sense of achievement and a foundation in team building to help them become strong, contented and self-confident women. GOTR challenges and encourages the girls, whatever their fitness level, and culminates with an amazing 5K run/walk event that brings girls of all backgrounds, from all over northwestern Arkansas to complete the event together.

UNIVERSITY OF MINNESOTA EXTENSION CHILDREN, YOUTH, AND FAMILIES AT RISK PROJECT (CYFAR)
ST. PAUL, WILLMAR AND WINONA, MINNESOTA

This CYFAR project is a part of the University of Minnesota Extension 4-H Youth Development program and is funded through USDA's National Institute for Food and Agriculture, which allocates funding to community-based projects for children and their families who are at risk for not meeting basic needs via the land-grant university extension services. The goal of this CYFAR project is to spark youth's passion for learning. Parents, guardians, youth workers and school staff work with participants to help them identify their learning and education goals. Youth are empowered to craft their individual education plans that incorporate nutrition and physical activity principles. Nutritious snacks are served at each program session and youth workers model healthy choices and help student make positive health decisions. A few examples of successful CYFAR youth projects include the American Indian Magnet School where participants walked a mile to the Big Urban Woods to study native plants and learn to make traditional Lakota/Dakota medicines for burns, stings and cuts. Another cohort at the Willmar Middle School focused on the science of cooking and nutrition by preparing healthy recipes and discussing their nutritional value. At the Winona site, a canoeing trip and ropes course helped youth gain leadership skills while engaging in physical exercise. Out-of-school time programs may not always have a primary focus on health and wellness and must be flexible to meet the needs of all stakeholders involved, including schools focused on academic achievement. This CYFAR project shows that nutrition and physical activity can be successfully integrated into any out-of-school time experience, whether it's a tutoring program, a college prep program, or a program that focuses on youth development and empowerment.

SAVE THE CHILDREN HEALTHY CHOICES PROGRAM
EDGEMONT ELEMENTARY SCHOOL, NEWPORT, TENNESSEE

Newport, Tennessee, is one community that is changing the face of childhood obesity. Despite long distances to community parks, a lack of healthy food options at restaurants in town, and limited opportunities for extracurricular activities, the rate of childhood obesity in the community is on the decline. In the 2011-2012 school year, the rate was 43.8 percent, down 1.4 percent since 2007-2008. One of the promising initiatives within the community has been the Save the Children *Healthy Choices* Program. *Healthy Choices* operates in the afterschool and summer environment in 15 states and the District of Columbia, serving more than 14,000 children living in poverty. Edgemont Elementary School, located in Newport, has partnered with Save the Children to provide an afterschool program for children since 2009. The *Healthy Choices* physical activity and nutrition component of the afterschool program, provides children with 30 minutes of organized physical activity each day, using the CATCH Kids Club curriculum and other approved games and activities. The noncompetitive design of the games played during *Healthy Choices* boosts the confidence of children and teaches them to become leaders, in turn teaching the younger children how to work together to accomplish their projects and activities. Through weekly nutrition education lessons, children learn how to identify healthy foods that can be swapped for the unhealthy ones, such as choosing crunchy carrot sticks to snack on rather than potato chips. The *Healthy Choices* Coordinator also invites children to assist in the preparation of kid-friendly, healthy snacks that are served in the program. Allowing children to participate in hands-on food preparation helps to change their perceptions of how healthy foods may taste. After eating the snacks they've prepared, they express their excitement for healthy snacks and continue to ask for them during the program, and even at home. Not only is the program making a difference in their physical health, but children also are learning healthy life lessons and having fun in a safe afterschool environment.

Initiatives Successfully Implemented in Rural Settings

- 4-H Healthy Living
  - » Growing in the Garden curriculum
  - » 4-H National Resource Library
- YMCA Food and Fun Afterschool
- CATCH (Coordinated Approach to Child Health) Kids Club

Additional Resources and Tools

- National Afterschool Association Standards for Healthy Eating and Physical Activity in Out-of-School Time Programs
- Afterschool Alliance Afterschool Toolbox
- National Institute on Out-of-School Time: Healthy Out-of-School Time Resources
- Alliance for a Healthier Generation Healthy Out-of-School Time Roadmaps
- ChildObesity180 Reference Library
- Out-of-School Nutrition and Physical Activity Initiative
- Strategies for Improving Out-of-School Programs in Rural Communities
- Financing and Sustaining Out-of-School Time Programs in Rural Communities

Rural Community Spotlight

The Cadillac Area YMCA, in Cadillac, Michigan, is dedicated to building a healthy, vital and caring community through enrichment and developmental programs for all. Two years ago the executive director, Dan Smith, identified a grant opportunity to start an afterschool program in his community. He approached the local principal at Lincoln Elementary and found the school's existing afterschool tutoring program was struggling due to limited resources. An additional program focused solely on nutrition and physical activity seemed out of reach.

He called together a group of community partners — the United Way, a local bank, the nearby Baker College and the local school district. He presented his vision to improve the health of students outside of school, and the team hashed out a plan to make it a reality. The program would provide afterschool snacks, opportunities for vigorous play, teacher-led tutoring, weekly field trips and a ride home, all at no cost to participants.

Just as everything fell into place, another larger grant opportunity from the Michigan Division of Community Health came across his desk. He met with the district superintendent and two additional principals to discuss the prospects of expanding the program. The result brought a similar, but play-based program using the **CATCH (Coordinated Approach to Child Health) Kids Club** curricula to three more elementary schools in the district and added another program to Lincoln Elementary. When another grant came along, Smith invited Pine River Elementary School in the neighboring district to participate. What started as one afterschool program exploded into six almost overnight for this underserved community. These students are now benefiting from a healthy snack, increased opportunities for physical activity, and, in two schools, a results-oriented tutoring program.

Smith has moved on to his next challenge. In an effort to address nutrition policy at the Cadillac Area Public Schools, Smith suggested the district replace the annual candy bar fundraiser with a healthy or nonfood fundraiser. In a county of 40,000 people, with a combined overweight and obesity rate of 76 percent, three elementary schools were selling 36,000 candy bars – nearly one to each resident. So, Smith and the local health department are embarking on another venture, to work with the local candy shop to find a healthy alternative.

Smith is committed to seeing healthy, happy children succeed and to helping them experience positive "Y-moments." Thanks to the community collaboration he formed around his efforts, he now has a large group of committed people working toward the same goal.

Chapter 6: Community Initiatives

The Role of Community Initiatives in Obesity Prevention

There are a number of assets that can be leveraged in a rural community to support and enhance efforts to improve the health of children. Smaller, more centralized local governments can make cross-department work and planning easier to coordinate. Local schools, prominent faith-based organizations and USDA county extension offices serve as a hub for many rural communities, and provide a natural starting point for many health and wellness initiatives. Also, local leaders, including superintendents, commissioners, county, town or village elected officials, interact more frequently with their constituents, providing advocates with valuable access both in professional and casual settings.[38]

Providing nutrition education to parents and families in the community can have a significant positive impact on children's diets because outside of school meals, rural children consume less food away from home than is the case with children living in other communities.[39] In addition, smaller communities are more likely to have personal ties with the owners of local food establishments, putting them in a better position to influence the development of more nutritious menu items.[39] Proximity to local farmers and producers can be an advantage in some rural communities by facilitating partnerships, which make fresh fruits and vegetables more easily available and affordable to a rural community.

It is also important to educate parents and families in the community about the benefits of active play and physical activity for the development and growth of young children. Young children are learning fundamental gross motor skills during the first six years of life and need many opportunities to practice these skills. For young children and older children physical activity is critical for maintaining a healthy weight and preventing obesity. Rural communities are often surrounded by public open spaces, which have the potential to offer a multitude of outdoor recreation opportunities.

Strategies

A wide variety of tools and resources are available to guide communities through the process of coalition building, selecting interventions, implementation and evaluation. Below we share a few strategies to help rural communities improve nutrition and increase physical activity. Each and every strategy may not meet the needs of your community. For example, in some states, rural areas will not have "downtown centers." However, a variety of strategies are presented so that you can select the options that best meet the needs of your community. To help implement these strategies, please refer to our "Resources" section at the end of the chapter, which links to tools and resources you can utilize. Evaluation resources will be found in Chapter 9, which provides a more thorough overview of evaluation in rural communities.

Overarching

- **Identify an integrator or champion to catalyze the initiative.** An integrator is an entity that works across multiple sectors to improve health and well-being and to build a coalition of key stakeholders in pursuit of a common goal. The integrator or champion can be a community-based organization, faith-based organization, local school district, a health system, a health department, another community-based entity or even an individual who helps to drive community change. The integrator conducts the needs assessment described below, identifies funding sources, gathers data, evaluates the initiative and ultimately spreads the policy and practice changes that work.
- **Identify strategic partners.** The planning process for obesity prevention initiatives should begin by working with the champion or integrator to identify community networks and strategic partners. A key asset for rural communities is the often tight-knit web of community networks. Joining forces among existing connections can bring together stakeholders with different backgrounds, expertise and resources to develop local solutions to local problems. The list of potential stakeholders is long, and whether it is the fire chief looking for a healthy pool of recruits, a pastor interested in improving the health of his congregation, or a local principal focused on improving attendance and test scores among her students, each of these potential stakeholders has a vested interest in improving the health of the children in his or her community. Building a network of concerned and engaged citizens and identifying common goals is a critical first step.

Examples of Partners That Can Contribute to Planning Rural Obesity Interventions

- Area Health Education Centers
- Block Clubs
- Business Owners and Organizations
- Charitable Groups
- Civic Events Groups
- Community Colleges
- Cultural Groups
- Disability/Special Needs Groups
- Education Groups
- Early Care and Education Settings
- Elderly Groups
- Environmental Groups
- Family Support Groups
- Fire Departments
- For-Profit Businesses
- Foundations
- Health Advocacy and Fitness Groups
- Heritage Groups
- Health Care Providers
- Hospitals and Public Health Departments
- Libraries
- Local Radio, Television, Print, and Internet Media, including Local Community Listservs
- Local Restaurants and Chefs
- Men's Groups
- Mentoring Groups
- Neighborhood Groups
- Nonprofits
- Parks and Recreation Departments
- Police Departments
- Recreation Groups
- Religious Groups
- Rotary Clubs
- Schools
- Service Clubs
- Small Business Associations
- Social Groups
- Social Service Agencies
- Transit Authorities
- Universities
- USDA Cooperative Extension
- Women's Groups
- Youth Sports Teams and Coaches

Source: Adapted from *Rural Obesity Prevention Toolkit/Discovering Community Power: A Guide to Mobilizing Local Assets and Your Organization's Capacity.* Kretzmann J, McKnight J. Asset-Based Community Development Institute, School of Education and Social Policy; Northwestern University, 2005.

- **Conduct a community health needs assessment.** Once a committed group of stakeholders is established, a community assessment will help to identify the community's needs and the resources available to help meet those needs. A community assessment will help to uncover the underlying cultural and social structures that will help you understand how to address the community's needs and utilize its resources.
  - **Needs** are identified in the gap between what is and what should be. A need can be felt by an individual, a group or an entire community. A need could be something tangible like greater access to fruits and vegetables in the local grocery store, or intangible, such as the desire for more buy-in and support for a local school wellness policy.
  - **Resources,** or assets, can include individuals, organizations and institutions, buildings, landscapes, equipment — anything that can be used to improve the quality of life. The volunteer who runs a local 4-H chapter, a community garden that provides space and opportunity to plant and harvest fresh fruits and vegetables and develop farming skills, and the bike and walking path connecting county residents to the town center — all represent resources that enhance community life. Every individual is a potential community asset who can be leveraged in this coalition-building effort.
- **Identify targets for behavior change based on ease of implementation and priority.** Once you have identified your community's needs and assets, you will be in a better position to identify a target population, desired behavior change and the most appropriate setting for change. One way to pinpoint the right focus for intervention strategies is to rank potential targets based on the criteria of importance by ease of implementation. Even small projects can have great impact. An early, visible win can help motivate supporters to take on a larger initiative or bring new stakeholders to the table. For example, a community-wide cleanup day requires only organization and volunteer hours but can make a difference in a community's willingness to be active outdoors in the long run.

- **Prioritize, select and adapt your approach to the unique needs of your community.** When implementing programs to prevent and address overweight and obesity, there is no "one-size-fits-all" approach. When selecting a program, consider involving a steering committee made up of representatives from the target audience. This committee can offer guidance on which issues have the highest priority and which will be easier and more difficult to achieve. The committee can also play a central role in selecting, adapting and guiding implementation of the intervention approach. Be flexible; if the first approach doesn't achieve the desired result, regroup and adapt the program to address shortcomings.
- **Convene community-wide, multi-sector coalitions to improve nutrition and physical activity and offer education, training and technical assistance to key partners and trusted community stakeholders, where necessary.** The most effective efforts to achieve obesity prevention occur when community residents and public and private sector organizations all work together through the coordinated use of resources, leadership and action.[40] The effectiveness of rural community coalitions stems from the different perspectives, talents and areas of expertise brought together. Obesity prevention efforts that have shown success combine multiple strategies in places where children learn, play and grow such as schools, Early Care and Education (ECE), out-of-school time programs, recreation areas and facilities, local businesses, social clubs, religious organizations, and eating establishments.[41, 42] Stakeholder training is key to ensure all partners are using the same message and implementing the interventions appropriately. For example, if you plan to ask the local pastor to engage her congregation in healthy Sunday suppers, she should receive training on healthy eating and menu planning to guide church members on what to serve. Also, be sure to include the county extension office in all activities. They may be able to provide important expertise, training and technical assistance to support your efforts.
- **Engage families in healthy eating and physical activity education and programming.** Children's environments strongly influence their behaviors, and meaningful and sustainable behavior change is unlikely to occur without full support from home, school and the larger community.[43] Rural families can face long travel distances from home to work and school. To be successful, healthy eating and physical activity must be built into daily routines. This means the community must work together to bring more fruits, vegetables and other health options to community stores and farmers markets and implement strategies to make communities more walkable, such as developing greenways between schools and playgrounds or adding lights to walking trails. Parents must be equipped with easy, tangible strategies to impact the health of their families on a daily basis. This could include ideas for indoor physical activity at home, family walking clubs, or education on quick, healthy changes a parent can make while grocery shopping. Making the healthy choice the easy choice can result in family-wide behavior change.
- **Identify and apply for public and private funding sources.** Consider existing federal programs and foundations with a history of work to improve health, such as CDC's Community Prevention Grants, the Center for Medicaid and Medicare Innovation, as well as private foundations such as the W. K. Kellogg Foundation, The Kresge Foundation, and Robert Wood Johnson Foundation. Don't overlook smaller amounts of funding from traditional and nontraditional partners. State and local health departments, hospitals or clinics, grocery stores, religious organizations, and even banks may be willing to assist you. Any business or organization interested in the community well-being has reason to support childhood obesity prevention efforts. **The Rural Assistance Center** also has a wealth of information and resources to help identify funding opportunities, improve grant-writing techniques and a customizable search feature to find funding available for your needs.

Improving Nutrition

- **Increase availability of healthier food and beverage choices in public service venues.** Public service venues, such as schools, child care centers, city and county buildings, parks, recreation facilities and juvenile justice centers, are key venues for increasing the availability of healthier foods. Setting a nutrition policy for all food sold and served (e.g., meal menus, vending machines and meetings) within local government facilities can improve availability of healthy foods and beverages and may increase the consumption of healthier foods. If a town-wide or county-wide policy is controversial, "pilot test" by implementing a healthy vending or healthy food and beverage policy department by department in one building to allow the policy to gradually bubble up to the highest levels.
- **Support neighborhood food stores and markets to help increase access to healthy foods and beverages.** Rural grocery stores provide critical infrastructure to rural communities and serve as important community economic engines, centers of public health and symbols of community vitality. Unfortunately, small communities across the nation are most often affected by poor access to supermarkets and healthful food.[44] Four successful models for rural grocers have been identified by the **Kansas Rural Grocers Initiative** to bring retailers back to small towns across the country. They include (1) the independent retailer, (2) a community-owned store, (3) a grocery co-op and (4) school-based ownership. Supporting these establishments could come in the form of financial assistance, grants, loans, tax incentives, marketing assistance, such as free or reduced-cost newspaper ads or radio spots, or technical assistance to help retailers purchase and stock healthy foods and beverages.

- **Establish community gardens and farmers' markets and encourage participation by lower-income earners, such as through acceptance of Supplemental Nutrition Assistance Program (SNAP) electronic benefit transfer (EBT).** Increasing the ability of residents to grow fresh food and access farms may help reduce grocery costs and increase availability and quality of fresh items to areas without nearby access to a grocery store. Acceptance of SNAP EBT provides direct access to additional customers, gives SNAP recipients access to healthy food, and encourages consumption of locally-grown produce.
- **Support breastfeeding in the community and worksites.** Breastfeeding rates in some rural communities lag behind national averages. Opportunities for increasing breastfeeding in rural communities include **enhancing workplace support,** maximizing the role of Women, Infants and Children (WIC) to educate women on the benefits of breastfeeding, **improving cultural awareness of breastfeeding practices,** increasing hospital breastfeeding assistance, and peer counseling programs.[45]

Increasing Physical Activity

- **Promote safe and visually appealing communities to encourage outdoor activity and recreation.** Crime, litter and traffic safety impact communities, and small communities with limited resources must identify the most pressing issues to get residents outdoors. While it may seem that an indoor community recreation center is the only solution to get people moving, a short-term strategy such as a community volunteer cleanup campaign, a neighborhood watch group, more defined crosswalks, additional streetlights, a walking trail, or even a new fence around child-designated areas could be effective strategies in certain rural communities. Do not overlook more simple and straightforward strategies in an attempt to achieve large ones.
- **Enhance investment, access, awareness and transportation to outdoor recreation facilities and downtown centers.** The right location can improve use and access. With many destinations spread out, locating new schools or playgrounds near one another can improve their usability. Adding an unpaved trail that connects people to the town center can promote physical activity and economic opportunities. Communities take pride in their amenities, towns and heritage. Bring them together by highlighting and incorporating local culture and landmarks to areas designed to promote physical activity, such as public parks.[46] Remind the entire community of the outdoor resources available to them through public awareness campaigns with signage, public radio spots and active social media pages. For recreational facilities that are not near the town center, provide transportation for youth and their families to enable access.
- **Improve safety and promotion of walking and biking to school and other community destinations.** Parks, sidewalks and bike lanes may be scarcely available or inconvenient in rural communities. Rural residents must think creatively to promote physical activity. Creative ideas to increase walking and biking include establishing bus drop-offs a few blocks from school to decrease car congestion for walkers and bikers and increase physical activity for those bused in. Also, evaluate different access points to schools, parks and recreation areas. New routes that run through public or even personal property could be possible with a shared-use agreement.

- **Consider participating in the Safe Routes to School (SRTS) program to increase the number of students who safely walk and bicycle to schools or bus stops.** Though this program may not be a fit for all rural communities, in some rural areas, SRTS can help provide funding for necessary infrastructure such as sidewalks, lighting and crosswalks, without a local funding match. **Low or no-cost SRTS activities** such as pedestrian and bicycle safety assemblies, walk-to-school or walk-at-school events, or **bicycle rodeos,** also can support a culture that promotes safe, active transportation to and from school.

Strategies in Action

THE GRAND AVENUE MARKET
PLAINS, KANSAS

The community of Plains, Kansas, had been without a community grocery store since 2001. In an effort to improve access to food and supplies for the community, five local citizens formed the Community Enhancement Foundation of Plains. Through grants and community donations, the Foundation purchased a 12,000-square-foot building in the Plains business district. With a concrete space, the group is now searching for additional grants to continue funding the construction and development of the site. The Grand Avenue Market, as it will be called, will serve as a Food and Nutrition Center, complete with a demonstration kitchen for teaching nutrition and healthy cooking methods. Adjacent to the educational station will be a certified incubator kitchen, which will allow local citizens to prepare and sell homemade goods in the store. If successful, the Grand Avenue Market will provide the much-needed grocery store, opportunities for small businesses to thrive, and increase nutrition education and healthy eating community-wide.

DUNCAN HEALTH COUNCIL
DUNCAN, MISSISSIPPI

The Duncan Health Council (DHC) was formed in April 2010 by a group of concerned residents to address local health, wellness and safety concerns. After conducting a community assessment, the council revealed the top health issue cited by town residents was the trash and litter cluttering the streets. A breeding ground for mosquitoes and a hazard to young children, litter discouraged people from exercising outdoors. As a result, the town passed a resolution designating September as "Duncan Cleanup Month" and the seven community churches began an adopt-a-street program. To address the need for safe exercise areas, the DHC, through the support of a broad range of partnerships including Blue Cross Blue Shield of Mississippi, transformed a former railroad bed in the heart of downtown Duncan into a paved walking trail for residents. Duncan is enhancing use of the walking train through walking clubs, a Walk-to-School day, and even building a new playground area for children nearby. The collaborative efforts of the DHC are allowing them to meet their mission "To make Duncan a community united with small town values where people want to live, be healthy and prosper."

THE BULLDOG EXPRESS
LEETON, MISSOURI

For years grocers in Leeton have come and gone. With the nearest full grocery store 15 miles away, the people of Leeton were living in a severe food desert. To fill the void, Leeton High School teachers and students teamed up to create the school-owned, student-run Bulldog Express. The store operates offsite of the school and offers fresh grocery products like milk, eggs and fruits and vegetables from local farms. The school works in partnership to sell local farm produce — the farmers bring produce to the store and the store sells it at a 10 percent markup. The store is bringing people together and giving the community hope, all while giving students an educational experience, which will help them succeed later in life.

SIOUXLAND COMMUNITY GARDEN
SOUTH SIOUX CITY, NEBRASKA

The Siouxland Community Garden, founded in 2010, serves a largely Hispanic community by providing participants with garden plots and hands-on growing assistance. Nebraska-based, Center for Rural Affairs supports the garden by providing information on organic practices, presentations from local farmers, small business training, and hands-on training in the garden — in both English and Spanish. New gardeners reduce family grocery bills by growing fresh fruits and vegetables, which too often aren't available in stores. Experienced farmers use the training to turn their gardens into small businesses, selling produce at farmers' markets and local stores. In fact, as a result of the community garden, the South Sioux Farmers' Market was established to accommodate both large, established vendors and small, new vendors such as the community garden farmers. The gardens and farmers' market are providing fresh, affordable food, opportunities for family fun and exercise, and entrepreneurship.

MARIPOSA COMMUNITY HEALTH CENTER AND NOGALES MERCADO FARMERS MARKET
NOGALES, ARIZONA

The Nogales Mercado is a recent addition to the Nogales downtown. With a focus on local food system development, the grant-funded farmers' market is a cooperative effort between Mariposa Community Health Center (MCHC), Nogales Community Development, and several other partners. Nogales Mercado proudly accepts SNAP Electronic Benefits Transfer (EBT) for SNAP-eligible food products like fresh vegetables, beef, pork, eggs, fruit and meat pies, bread, and other baked goods. And the partnership with the Mariposa Community Health Center is a perfect fit, given their commitment to family nutrition education and wellness. The Center conducts fitness classes, school-based nutrition education programs, breastfeeding support groups, and even houses a WIC program. MCHC and the Nogales Mercado Farmers Market work together recognizing that access to healthy food and nutrition education go hand in hand to promote good health and prevention of chronic disease.

IOWA 4-H HEALTHY LIVING PROGRAM: COOK THIS! CULINARY CHALLENGE

4-H is the nation's largest youth development organization, serving more than six million young people across America with programs in leadership, citizenship, communication and life skills. It is a big deal in Iowa — one in five Iowa school-age youth participates in 4-H. Each year at the Iowa County Fair, the Iowa 4-H puts on the *Cook This!* Culinary Challenge. During the 2013 competition, 28 teams and more than 80 youth participated in the culinary competition. The challenge consists of four parts to test participants' skills in equipment and food product identification, meal completion, creativity, communication and teamwork. During the challenge, teams prepare ethnic cuisine and provide a presention on different food and nutrition-related topics. The challenge allows youth to exhibit their nutrition, skill and creativity while preparing food, promoting teamwork, and perfecting their public speaking skills, in a fun competitive event. Competitors' local 4-H chapters support them by teaching these skills in their regular 4-H programming. The *Cook This!* Culinary Challenge is a cooking competition on a grand scale. This type of hands-on learning activity has the potential to help an entire community become interested in the benefits of healthy eating.

GRANVILLE GREENWAYS
GRANVILLE COUNTY, NORTH CAROLINA

Granville County was facing high rates of obesity, heart disease, diabetes, stroke and cancer. A Health Promotion Workgroup formed to address these chronic disease concerns and created a plan to improve the walkability of the county communities. The county manager in the workgroup encouraged the group to focus on creating a plan for the entire county, rather than creating trails one by one, which turned out to be a key turning point for the workgroup. The county plan — Granville Greenways Master Plan — outlined the future of a county that embraces changing the built environment to promote active lifestyles. By 2010, the advisory council's construction and design standards had been approved, all cities and towns in Granville County had adopted the Master Plan, and construction was underway on the county's first greenways. The Butner-Stem School Trail is nearly two-thirds of a mile long and connects the elementary school, middle school, and baseball field. Parents can now walk their children between the schools instead of driving the perimeter. Now, Granville Greenways works to encourage the county and its municipalities to include greenways in every discussion that involves new construction of any type, reconstruction or improvements to existing roads, walkways, recreation areas, neighborhoods and utility easements. The greenways provide recreation, alternative transportation, improved water quality, habitat conservation, flood control and even increased property values in the community.

Initiatives Successfully Implemented in Rural Settings

- Rural Obesity Prevention Toolkit: Models for Communities
- AmeriCorps VISTA (Volunteers in Service to America)
  - » FoodCorps, Inc. (grantee of AmeriCorps)
- Utilizing Innovative Grocery Store Ownership Models
- Shaping Kentucky's Future: A Community Guide to Reducing Obesity, Local Success Stories
- Farmers Market Models
- Principles for Improving Transportation Options in Rural and Small Communities
- Safe Routes to School
- Developing and Maintaining Trails
- Creating Walkable and Bikeable Communities
- Tools for Healthy Tribes

Additional Resources and Tools

- *Let's Move!* Faith and Communities
- *Let's Move!* Cities, Towns and Counties
- Community Strategies and Measurements to Prevent Obesity in the United States, Implementation and Measurement Guide
- Community Healthy Living Index
- The Community Guide
- Public Health Institute, Health in All Policies Guide
- Communities of Excellence in Nutrition, Physical Activity and Obesity Prevention (CX3)
- *We Can!* (Ways to Enhance Children's Nutrition and Activity)
  - » *We Can!* Materials for Ethnically Diverse Populations
- Rural Obesity: Strategies to Support Rural Counties in Building Capacity
- State Initiatives Supporting Healthier Food Retail: An Overview of the National Landscape
- Smart Growth America's Resources for Rural Communities
- Reconnecting America
- Community Commons
- National Rural Health Association

Rural Community Spotlight

SUSSEX OUTDOORS INITIATIVE
SUSSEX COUNTY, DELAWARE

In 2013, Delaware was named the nation's fifth most bikeable state, in no small part due to the Sussex Outdoors Initiative. *Sussex Outdoors* is a multipronged community awareness campaign focused on increasing outdoor activities in Sussex by making families aware of opportunities for outdoor activities and by increasing those opportunities. The strength of *Sussex Outdoors* lies in the partnership between the Governor's Office, Delaware State Parks, Sussex County Council, Sussex Child Health Promotion Coalition, Nemours Health & Prevention Services (an integrator in Delaware) and the majority of the Executive Branch of Delaware State Government.

The campaign incorporates a variety of initiatives occurring in multiple sectors of the community, including schools, workplaces, state parks and other community-based institutions. The innovation, collaboration and contributions have been critical to the success of the initiative. It also includes a cross-cutting marketing campaign designed to build the *Sussex Outdoors* brand, increase visibility through traditional and social media, and establish creative ways to expose Sussex County to a fun, healthy and new way of living.

Through *Sussex Outdoors,* county fourth graders are brought annually to Trap Pond State Park to learn about the wealth of trails and pathways available to them, as well as receive basic bicycle safety instruction. The program is designed to highlight the Delaware path system as a backdrop for activating a healthy lifestyle. School districts and local colleges also have taken action by adopting and implementing comprehensive school wellness policies and practices that focus on improving access to healthier foods throughout the school campus, expanding opportunities for physical activity during the school day through walking programs, and enhancing the availability of nutrition information. Many school gardens are sprouting up as a result of the effort.

In addition, several workplaces in Sussex County have integrated physical activity programs and are promoting healthier lifestyles to their employees, patients, clients and constituents. Many have walking programs and hold health fairs and annual 5K walk/run events.

Sussex Outdoors supports a statewide effort called "Munch Better at Delaware State Parks," where healthy food items are offered for sale and from vending machines. Park concessions follow the standards laid out in the Nemours Healthy Concessions Guide and the Healthy Vending Guide. Delaware is the first state to launch such an initiative.

Many Sussex County churches have integrated physical activity programs or have promoted healthier lifestyles in their youth programs through basketball camps, weight lifting, exercise classes and walking programs. Sussex County youth organizations, such as the Boys and Girls Clubs, YMCA, 4-H and Boy Scouts have adopted and promoted outdoor physical activity programs.

Sussex Outdoors, Nemours Health & Prevention Services and the members of the Sussex Child Health Promotion Coalition are taking proactive measures to implement opportunities to address obesity, and they have taken their message where it will do the most good — to the children and families living in the community.

Chapter 7: Health Care Providers

The Role of Health Care in Obesity Prevention

In 2007, an expert committee of physicians, scientists and clinicians published **recommendations** for the assessment, prevention and treatment of child and adolescent overweight and obesity. The committee recommended children and adolescents receive, at a minimum, an assessment of risk factors, measurement of Body Mass Index (BMI), and basic counseling and support for family lifestyle change. The expert committee recommends clinicians advise patients and their families to adopt and maintain the following practices:

- Limit consumption of sugar-sweetened beverages.
- Encourage consumption of diets rich in **fruits** and **vegetables.**
- Limit television and other screen time (no viewing before two years of age and less than two hours per day thereafter).
- Remove television from the primary sleeping area.
- Eat breakfast daily.
- Limit eating out.
- Encourage family meals.
- Limit portion size.
- Eat a diet rich in calcium.
- Eat a diet high in fiber.
- Eat a diet with balanced macronutrients (food groups).
- Promote moderate-vigorous activity of at least 60 minutes/day.
- Limit consumption of energy-dense foods.
- Encourage exclusive breastfeeding to six months of age and maintenance breastfeeding after introduction of solid food to 12 months of age and beyond.
- Achieve adequate sleep (evidence for this recommendation developed after the initial report was published).

As BMI increases, the recommendations move to a stratified approach where the intensity of the intervention varies by the level of BMI. Higher levels of treatment include more frequent visits and follow-up care with physicians, dietitians, and exercise and behavior specialists, culminating in care in a multidisciplinary weight management clinic if BMI fails to decrease.[47]

In rural communities, barriers to accessing health care, which are often outside of the health provider's control, make it difficult to implement early obesity screening and intervention programs.[38] Despite the high need for health services, rural counties face severe physician shortages — 60 percent of rural white Americans and 75 percent of rural minority Americans live in designated **Health Provider Shortage Areas.**[48] When health care providers are available, geographic barriers such as distance, extreme weather conditions, lack of public transportation, and challenging roads limit and in some cases prohibit rural residents from accessing essential health care services.[49] For children and adolescents needing more intense levels of obesity treatment, frequent visits to your practice may be unattainable if families must travel long distances. As a result, children may not receive the recommended amount of follow-up care or participate in potentially life-improving therapies.[50]

Access-to-care issues are not the only barriers facing families. Obesity is a complex disease and its prevention and treatment require a multi-sector approach that involves healthy changes by youth, parents, schools, early care and education (ECE) settings and the community.[51]

Fortunately, health care providers can be actively involved in these solutions and can make a difference in the lives of patients by:

- routinely implementing clinical practice guidelines;
- developing skills, such as motivational interviewing, to improve communication with patients and families;
- expanding the multidisciplinary team to include school nurses, Community Health Workers, promotores or others who can regularly interact with families outside of the health care setting;
- engaging in multi-sector collaborations with early care and education providers, schools and other community partners to provide expertise and a powerful voice for obesity prevention efforts; and
- implementing policies in clinics, hospitals or other public health settings that support healthy lifestyles.

Strategies

The **American Academy of Pediatrics' mission statement for childhood obesity** is to "bring awareness to the serious health problem of childhood overweight and obesity; empower [health care providers] and families to take action in their homes, offices and communities to prevent childhood obesity; and to support [health care providers], families and community advocates in improving the health status of those children who are already overweight and obese." Below we share a few strategies to help a broad array of health care providers achieve this mission. To help implement these strategies, please refer to our "Resources" section at the end of the chapter, which links to tools and resources.

Overarching

- **Follow standards of practice that include routine screening of physical activity and eating behaviors and risk for overweight and obesity and follow-up educational counseling.** The 2007 expert panel recommendations cited changing office systems to support efforts to monitor, prevent and treat child and adolescent obesity.[47] This can be accomplished in a number of ways. BMI should be calculated and plotted at least annually at well child visits. Additionally, implementing a practice that children's heights and weights are measured according to a standardized protocol at each health care visit can help ensure BMI is monitored, even if children do not consistently attend well visits. The use of patient-centered counseling techniques, such as motivational interviewing, can help families identify their own motivation for making change.[52] Consider developing patient protocols and charting forms, as well as EHR alerts that prompt health care providers with specific questions to ask parents and caregivers and a potential list of topics to discuss with families at the visit.

- **Implement innovative methods to facilitate and improve physician communication, screening and counseling on physical activity, eating habits and breastfeeding.**

  - The care and consultation provided by a health professional can be strengthened if it is paired with tangible supports outside the office. To help patients and families make better decisions about healthy nutrition and increase physical activity, consider making connections between the clinical setting and daily life. For example, **health care providers and farmers markets** can work together to reinforce healthy eating and provide access to fresh fruits and vegetables. Local public health and human services agencies can assist providers in referring patients to effective wellness and behavioral health programs in the community.

  - Health information technology is another tool that can help patients and families follow a prescribed self-management program. As the use of electronic health records (EHRs) grows, opportunities are available to use the systems to enhance childhood obesity prevention efforts. If you have an EHR system in place or plan to implement one in the future, consider building in prompts that require providers to screen for height and weight during each visit. If the patient's BMI is above the healthy weight range, then electronic clinical protocol would outline appropriate follow-up and counseling for families regarding targeted lifestyle behaviors. The EHR and corresponding patient portal could also make available to patients and their families patient education materials that supplement prescription orders and other documents associated with a typical office visit. Finally, the EHR could be linked to other community health care providers, such as school nurses (with parent permission and consistent with all privacy laws), so that school nurses have access to and reinforce a child's care plan.

  - Expanding the use of **telemedicine,** the remote diagnosis and treatment of patients using two-way voice and visual communication as by satellite or computer, is another strategy with tremendous potential for reducing health disparities in rural populations.[53] Telemedicine has the potential to allow rural families to access obesity treatment, which may be limited due to geographic barriers.[54] Early studies in the field have shown that telemedicine used for pediatric obesity treatment may increase family enrollment in obesity programs, decrease attrition and have positive impact on diet, activity and weight.[50]

- **Implement health care delivery models that incorporate Community Health Workers (CHW), or other navigators who support healthy behaviors and compliance outside the health care facility.** CHWs are lay members of communities who work either for pay or as volunteers in association with the local health care system in rural environments and usually share ethnicity, language, socioeconomic status and life experiences with the community members they serve. Different titles for a CHW role include community health advisors, lay health advocates, promotores, outreach educators, community health representatives, peer health promoters and peer health educators. CHWs act as an important liaison between health providers and patients in obesity prevention. Their services could include:
  - » interpretation and translation services,
  - » providing culturally appropriate health education and information,
  - » working with a health care team to improve care coordination,
  - » conducting home visits,
  - » serving as liaisons between the families and their health care providers to help clinicians understand the nonmedical and social factors influencing a child's health, and
  - » providing informal counseling and guidance on health behaviors.

  Other potential roles for CHWs include conducting health fairs and working with restaurants to improve healthy children's menu options. They can be important community advocates for environmental and policy change to improve the health of the community.

- **Convene multi-sector collaborations with early care and education (ECE) providers, schools and other community partners to provide education regarding obesity prevention efforts.** A child's interaction with the health care system is a small piece of the multitude of factors influencing his or her health. Children spend a great deal of time in ECE and school settings, and ensuring that those environments are healthy will play a large role in determining whether a child will have the opportunity to follow the advice provided to them in the clinical setting. As a trusted resource for families and an authority on health, health care providers can influence and add credibility to interventions being implemented in other sectors. Ideas to get more involved include joining local wellness policy councils for schools, out-of-school programs and ECE settings; giving presentations at parent nights; and mentoring young people interested in health careers. Also, consider presenting at school board meetings, regional planning meetings and state legislative hearings to convey the impact of education, transportation and planning decisions on health when appropriate. A combined approach that involves health care providers in greater collaboration with the community can result in a strong and powerful movement to promote healthy environments and public policy.[55]

- **Develop, implement and evaluate health and wellness policies to support healthy nutrition, physical activity, limited screen time and breastfeeding in health care and public health facilities.** Health care facilities and public health departments are uniquely positioned to model healthy nutrition. Consider adopting a policy to increase nutritious options throughout cafeterias or vending machines. Change cooking methods in your hospital or health department cafeteria to reduce fried foods, offer more fruits and vegetables, limit sugary beverages, display only healthy options by check-out counters, and offer more nutrition information to help families make smart choices. Encourage staff to bring in healthy snacks and meals and hang posters and provide reading material in your office that support healthy eating and physical activity. Offer healthy choices in vending machines and provide access to free water to encourage its consumption over sugary drinks. Health care providers and public health partners have the ability to change their organizational culture to better support healthy eating and physical activity.

- **Encourage and support breastfeeding.** Support new moms by developing policies which include **maternity care best practices** such as allowing babies to room with mothers and discouraging the use of pacifiers until breastfeeding is well-established. Support hospital staff who are breastfeeding by providing employees with a lactation room. Lactation consultants, if available, and peer support groups can help new mothers initiate and maintain breastfeeding by providing counseling and support. In addition, per the requirements of the Affordable Care Act (ACA), insurers are now covering breast pumps, and many employers are providing **breastfeeding accommodations at the worksite.**

- **Identify and apply for public and private funding sources to better integrate your obesity prevention efforts with those of other sectors.** Consider existing federal programs and foundations with a history of work to improve health, such as CDC's Community Prevention Grants, the Center for Medicaid and Medicare Innovation, as well as private foundations such as the W. K. Kellogg Foundation, The Kresge Foundation and Robert Wood Johnson Foundation. Do not overlook smaller amounts of funding from traditional and nontraditional partners. State and local health departments, hospitals or clinics, grocery stores, religious organizations, and even banks may be willing to assist you. The case could be made to any business or organization interested in the community well-being that childhood obesity prevention efforts are worthwhile. The **Rural Assistance Center** also has a wealth of information and resources to help identify funding opportunities, improve grant-writing techniques and a customizable search feature to find funding available for your needs.

Strategies in Action

BRENNER FIT (FAMILIES IN TRAINING) PROGRAM, TELEFIT
WINSTON-SALEM, NORTH CAROLINA

Brenner FIT provides a comprehensive pediatric weight management program to a 19-county region in Northwest North Carolina (NWNC). Due to this broad reach, including both urban and rural communities, many patients seeking treatment must travel up to 90 miles to attend treatment visits. To address the burden of distance, **Brenner FIT** established a clinical outreach program called TeleFIT for families living 45 or more miles from the clinic. TeleFIT offers pediatric obesity treatment via telemedicine. Initial intake visits and medical review visits are held at the original Brenner FIT location once every four months. More frequent treatment visits with the Brenner FIT dietitian and family counselor are conducted via a HIPPA (Health Insurance Portability and Accountability Act)-approved webcam at four pediatric clinics located in rural NWNC. Over the one-year period of the program, TeleFIT families must only travel to the Brenner FIT clinic four times, where traditional participation requires 16 visits to the clinic. In a **recent study** of the program, researchers found TeleFIT and traditional Benner FIT participants had similar positing outcomes and similar rates of attrition, making this approach a viable and sustainable option for the program.

ST. ANTHONY'S SUMMIT MEDICAL CENTER
FRISCO, COLORADO

St. Anthony Summit Medical Center is a full-service, 35-bed hospital, serving nearly 30,000 Summit County permanent residents and more than 100,000 on any given ski day. The medical center is a Level III trauma center and serves as the mountain base for Flight for Life Colorado's air ambulance. As part of a broader initiative, called the **Hospital Healthy Food Initiative,** the hospital committed to delivering healthier options for patients, guests and employees. Over the next three years, St. Anthony's Summit Medical Center will be making several changes to increase the availability of nutritious options throughout its facility, including offering a daily adult and children's wellness meal, at an affordable price, that meets healthy nutrition standards, as well as eliminating fried food. Changes in hospital purchasing will also help the hospital serve healthier options. Summit has agreed to increase fruit and vegetable wholesale purchases by 20 percent and to increase the purchase of healthy beverages by stocking more water, 100 percent fruit and vegetable juice, unflavored milk, teas and coffee. The medical center is also proud to have achieved the **Colorado Can Do 5!** Award for implementing policies to address five hospital maternity-care best practices that help with successful breastfeeding. St. Anthony's Summit Medical Center proves, big or small, healthy hospital policy can be achieved.

MHP (MIGRANT HEALTH PROMOTION)
RIO GRANDE VALLEY OF TEXAS

The mission of MHP is to bring a healthy future to the underserved communities of the lower Rio Grande Valley and to support the health needs of farmworkers across the country. MHP promotes the health and wellness of farmworkers and their families through health education and the Promotor(a) model. Promotores and Promotoras help their peers stay informed, access health resources and build healthier communities. One MHP program offered in three Texas colonias is helping communities with diabetes self-care management, community organizing, healthy eating and physical activity. The activities of the *Promotora Community Program* emphasize family and community-based solutions that are culturally and linguistically appropriate. Cooking and nutrition classes, exercise groups and health education sessions involve the participants in changing behavior, such as consuming more vegetables and fruits, drinking less sugary beverages, and including daily physical activity into their routines. MHP is also expanding the reach of CHWs and Promotores by offering **training** to support others interested in developing, implementing and evaluating CHW programs.

DELAWARE SMALL COMMUNITIES INITIATIVE – COMMUNITY TRANSFORMATION GRANT
SUSSEX COUNTY DELAWARE

In Delaware's rural Sussex County, the largest pediatric health care provider in the state is partnering with schools to address childhood obesity. Nemours, an integrated child health system in the Delaware Valley and Florida whose core mission is helping children grow up healthy, received a two-year award from the Centers for Disease Control and Prevention's Community Transformation Grant program to give schools the tools they need to improve their district wellness policies. Schools are concurrently developing action plans to align with the revamped district policies. To help create a sustainable model, Nemours is helping to recruit health care professionals, including their own pediatricians, to serve on school wellness councils. To reinforce healthy messages at home, Nemours is training school personnel to offer positive parenting workshops that help parents acquire the skills they need to develop positive relationships with their children. This type of multi-sector partnership shows the critical role that health care organizations can play in community-wide obesity prevention efforts.

Initiatives Successfully Implemented in Rural Settings

- Rural Obesity Prevention Toolkit: Models for Health Care Providers
- Technology-Supported Multicomponent Coaching or Counseling Interventions to Reduce Weight or Maintain Weight Loss
- Community Health Workers
- Recreation Rx
- Baby Friendly Hospital Initiative
- Central California Regional Obesity Prevention Program

Additional Resources and Tools

- *Let's Move!* In the Clinic
- AAP *Bright Futures:* Health Care Professionals Tools and Resources
  - *Bright Futures* Nutrition
  - *Bright Futures* in Practice: Physical Activity
- *Bright Futures:* Family Resources (handouts, videos, and activity books)
- Hidalgo Medical Center: BMI toolkit for primary care providers
- Migrant Health Promotion: Community Health Worker Training and Support
- Healthier Hospital Initiative
- Hospital Healthy Food Initiative

Rural Community Spotlight

HIDALGO MEDICAL SERVICES
GRANT AND HIDALGO COUNTIES, NEW MEXICO

In 1995, Hidalgo Medical Services (HMS) was established by a community partnership to fill the void for quality health services in the frontier area of southwest New Mexico. Today, this network of community health center clinics and school-based health centers has helped revitalize the health care and the economic well-being of the region. The vision of founder Charlie Alfero, now Director of the HMS-Center for Health Innovation (HMS-CHI), is one of "comprehensive patient support and community health improvement models." Comprehensive community support comes in the form of a one-stop-shop for medical, dental, behavioral health and family support services (FSS). Community health workers (CHWs), known as Promotoras, form the backbone of HMS's health care delivery system, serving as liaisons, interpreters and a social support network for patients.

La Vida (Lifestyles and Values Impact Diabetes Awareness), a program provided by HMS FSS Promotoras, was designed to raise awareness of diabetes and provide lifestyle solutions to prevent and treat the disease. La Vida provides nutrition classes, an "Active and Alive" fitness class program including activities such as water aerobics and advanced line dancing, and connects residents to other county fitness resources such as **walking trails.** Their **Viva NM Restaurant** program offers free training and technical assistance to help local restaurants develop and serve healthy, diabetes-friendly menu items.

HMS engages with schools and Early Care and Education (ECE) providers through collaboration, coalition and community building with traditional partners, such as county extension, and nontraditional ones like the farm bureau. The approach is basic; they focus on face-to-face communication, personally delivered education and printed materials. For example, with so few child care centers, education on healthy ECE behaviors is delivered directly to relatives and families assuming the role of child care providers for the community. The program has expanded over the years to include intensive high cost patient care coordination and integrated Patient-Centered Health Home modeling. HMS-CHI staff are developing multi-state Medicaid Managed Care Curricula to support the training of CHWs as Care Coordinators. Through HMS-CHI, the use of CHWs as policy, environmental and systems change agents is being modeled in five states in 10 communities in order to create better living conditions at the community level.

In Grant County, HMS partnered with a local nursing school and the school district to start a BMI surveillance program. Nurses assist with BMI measurement, the schools report the information to parents, and students are referred to their primary care physicians, as needed. To support the effort a toolkit was developed for primary care providers with motivational interviewing techniques, and families were provided with resources on healthy eating and cooking skills. HMS also works with the New Mexico Department of Health to support their **Healthy Kids 5-2-1-0 Challenge** to encourage consumption of five fruits and vegetables, two hours of screen time or less, one hour or more of physical activity, and zero sugar sweetened beverages throughout the community.

HMS-Center for Health Innovation has worked diligently for the past two years with community partners to improve local access to nutritious foods. In this time, the coalition has initiated a school garden, two farmers markets, and a gleaning program providing 27,000 pounds of fresh produce to over 230 homes. HMS staff is quick to credit multiple partners such as the Hidalgo County Food Coalition, local schools, local nonprofits, county extension service and a university for this success. As a result of this collaboration, a regional coalition also was formed to give a stronger voice on regional and state food policy issues for four rural counties where HMS operates.

Through the ***Forward NM*** program, HMS is improving frontier and rural workforce development. Their pathway to *"Grow Your Own!"* reaches aspiring health professionals at all points in their education, beginning in middle and high school, through undergraduate, medical school, and residency. By providing enrichment, training, internships, rotations and residency opportunities, HMS is supporting the next generation of rural health providers.

Hidalgo Medical Services is a national model for addressing health disparities. Through collaboration and education, HMS is improving the health of New Mexicans now and for the future.

Chapter 8: Recommendations to Policymakers for Preventing Obesity in Rural Communities

Overview

This toolkit provides strategies that practitioners and leaders in a variety of child-serving sectors can implement to help prevent childhood obesity. In some cases, strategies may be initiated through a simple, informal practice change, but in other cases, strategies will require policy changes at the local, state or federal level of government or at the institutional level. This chapter is intended to educate policymakers about policies that are practical and impactful in creating healthful environments for children. Each strategy may not meet the needs or reflect the characteristics of every rural community; however, policymakers should be aware of policy options that would best apply to their specific communities.

Overarching

- Provide federal, state and local funding to plan, implement and evaluate community-wide, multi-sector obesity prevention efforts that engage youth and families and include a focus on rural communities.
- Engage local business owners in making healthy changes that will impact their employees and their families.
- Support in-person training or distance education opportunities, technical assistance, curricula and professional development of early care and education (ECE) providers, food service staff and teachers in implementing obesity prevention and family engagement strategies in ECE, school and out-of-school time settings in rural communities.
- Invest in building an evidence base by providing funding for research into best practices for obesity prevention in rural communities and methods for disseminating lessons learned and strategies for overcoming challenges.
- Establish state and local requirements for wellness policies and wellness councils in schools and ECE settings and provide federal, state or local funding for training, technical assistance and tools to support implementation of the requirements.
- Participate in or start a coalition of multi-sector stakeholders around policy changes on multiple levels including private sector businesses, schools, ECE, health care providers, parent/family groups, faith-based institutions, community partners such as 4-H, the YMCA, Boys and Girls Clubs, Boy and Girl Scouts, cooperative extension, and others, as well as the local, state and federal government.

Improving Nutrition

ECE, School & Out-of-School Time (OST) Settings

- Support and fund state agency efforts to promote awareness of and encourage participation in federal nutrition assistance and child nutrition programs, such as the Supplemental Nutrition Assistance Program (SNAP), Child and Adult Care Food Program (CACFP), National School Lunch Program (NSLP), School Breakfast Program (SBP), Summer Food Service Program (SFSP), Fresh Fruit and Vegetable Program (FFVP).
- Support initiatives and standards that improve the quality of culturally appropriate meals, snacks, vending and a la carte items offered in ECE, schools or OST settings.
- Support the integration of nutrition education in schools and ECE settings.
- Encourage community gardens, farm-to-school/pre-school, fish-to-school programs and other programs that increase access to fruits and vegetables in the school, ECE or OST setting.
- Develop procurement policies that support local, healthy foods in ECE and school.
- Encourage purchasing cooperatives and group purchasing organizations to increase access to healthy foods.

Community Settings

- Provide grant and loan programs, small business development programs and tax incentives that encourage grocery stores, farmers' markets and mobile markets to develop businesses in rural areas.
- Encourage and incentivize farmers' markets to accept Supplemental Nutrition Assistance Program (SNAP) electronic benefit transfer (EBT).
- Institute a **Healthy Food System Resolution,** a resolution passed by a local government explaining why a healthy food system is necessary and presenting local action steps and policies to support the system.
- Encourage and incentivize restaurants and other food-service establishments to adopt policies promoting healthier foods and beverages, reasonably sized portions, and posting calorie and nutrition information on menus.
- Develop government procurement policies that favor local, healthy foods in public facilities.
- Appoint a local food policy council or advisory board to provide information and advice on policies and programs that support food access, nutrition, agriculture and food production issues.
- Encourage state and local government facilities to make accommodations for breastfeeding mothers, consistent with the requirements in the Affordable Care Act.
- Support partnerships that develop shared-use agreements allowing OST staff to use local facilities and ensure access to cafeterias before and after school for food storage and preparation space.

Increasing Physical Activity

ECE, Schools and OST

- Improve state policies and local standards requiring minimum required amounts of time for physical education in schools and include regulations for physical activity in state licensing requirements for ECE.
- Improve state policies and local standards requiring minimum amounts of time for age-appropriate physical activity, including time for recess in schools.
- Provide funding to support high-quality physical education (PE) classes in schools, including support for training and professional development of PE providers, as well as equipment.
- Provide funding for training of ECE providers regarding promotion of physical activity and screen time reduction.
- Support partnerships that develop shared-use agreements allowing community members to use local government- and school-owned recreational facilities. Ensure children have access to school gyms, during supervised time, before and after school since schools have the ability to offer physical activity programming before and after school.
- Work with local communities to find solutions to transportation issues that impede physical activity, which may include support for **Safe Routes to School (and bus stops)** initiatives or providing funding for "late buses" or other means of transporting students from after-school activities such as sports, games or other extracurricular activities.

Community Planning

- Develop or re-evaluate long-term transportation and land use plans to increase access to safe venues for physical activity, including investing in public transit to improve connectivity.
- Implement policies and provide funding for state and local transportation initiatives that include safe, active living components.
- Collaborate with and incentivize developers to locate new schools near parks, recreation facilities, trails or downtown centers and provide public transportation to these venues.
- Implement plans that increase mixed-use development in downtown areas to support families in their efforts to be active during daily activities and ensure public transportation connects to downtown centers.
- Implement policies and provide funding that creates paths to connect schools, parks and residential neighborhoods.
- Invest in community development to maintain, beautify or build new recreational facilities where youth can be physically active.

Improve Access to Primary Care Prevention and Treatment of Obesity

- Encourage public and private health insurers to provide reimbursement for preventive services referred by licensed providers but performed by other qualified health providers, such as community health workers.*
- Create opportunities for collaborations between health care providers and other sectors, such as schools and ECE, to ensure that health professionals have a role in shaping wellness policies and implementing broader obesity prevention efforts.
- Enhance policies and incentives that improve access to and retention of health care professionals, including pediatricians, in rural areas to increase the likelihood that children at risk for obesity will have access to a consistent primary care provider.

** This provision is now allowable under the Final Rule: Medicaid and Children's Health Insurance Program:, Essential Health Benefits in Alternative Benefit Plans, Eligibility Notices, Fair Hearing and Appeal Processes, and Premiums and Cost Sharing; Exchanges: Eligibility and Enrollment. Centers for Medicare & Medicaid Services. Section 42 CFR §440.130. 78 Federal Register 42160. July 15, 2013.*

Chapter 9: Monitoring and Evaluating Progress

Overview

Evaluation is a valuable and necessary step to produce supporting evidence of outcomes related to obesity prevention initiatives. This overview of evaluation is designed to provide general information to get you started. We provide links to a number of training modules, technical assistance resources and tools that will walk you through the evaluation process and be of value to both novice researchers and those who wish to sharpen their skills. The "Resources" section at the end of this chapter provides a description of the variety of evaluation technical assistance and tools available for your community.

Importance of Documentation and Evaluation

Evaluation is a systematic process that uses both qualitative and quantitative data to monitor progress of programs and initiatives and measure outcomes associated with specific project activities. These data can also measure the effectiveness, reach and impact of specific elements of your initiative to help you better understand what works. Evaluation is a key step in the life of an initiative because it can reveal, in an unbiased manner, the strengths and weaknesses of programs and practices and identify ways to improve program management and implementation of the initiative. These performance and quality measurements can help build the case for continuation and support expansion of program interventions to funders and community partners. Evaluation data also allow you to continuously monitor the impact of your interventions over time.

Evaluation begins during the planning phase and should continue throughout the initiative, with a quarterly or annual review of performance data. Documenting what you're doing by **collecting data** and then using that data to measure progress is key to building an evidence base for what works in rural communities.[56] This information will help assess the quality, cost, effectiveness and impact of a policy, program or intervention. Understanding these factors will allow for the best use of limited resources towards the most effective policies and programs and allow you to share findings and lessons learned with other communities working to implement similar initiatives.

Before, During and After

Before you begin your program you will need data. This is called the formative evaluation process, which will help you identify community demographics, determine needs in the community, define the scope of the problem and prioritize solutions. Formative evaluation also provides the data and information to build a case to potential funders and submit competitive grant applications.

Example Variables: Formative Research

- Size of Target Population
- Geographic Range (Number of Counties, Square Miles, Etc.)
- Percent Population by Age
- Percent Population by Race
- Levels of Education
- Number of Schools
- Number of Parks
- Obesity Rates by Geography

Process evaluation looks at how programs are delivered. Are you reaching your target audience? Process evaluation helps you to better understand whether the program is being implemented as planned as well as reveal previously unidentified community needs and critical gaps in program adoption within the community. For example, if the planned intervention introduced healthy vending standards at a local swimming pool, but a vendor just outside the pool area continued to sell unhealthy snacks; would this negate your efforts to change eating habits?

Outcome evaluation measures whether your program implementation is leading to desired change as well as identifying unintended consequences. This evaluation process allows for full analysis of the information collected, and offers the ability to draw conclusions, identify themes and answer original research questions. Outcome evaluation should also include a strategy for sharing results with stakeholders and the broader community.

Gathering Evidence

In order to effectively carry out your evaluation you must begin with quality data. **Developing a logic model** will help you to identify the kinds of data and the points in time and critical contacts that you will need in order to collect these data and will help you sharpen your program efforts and design. You will likely use a combination of both quantitative and qualitative data for your evaluation, both of which can be used at any phase in the project.

Quantitative data are quantities that represent specific variables or subjects of interest to your initiative such as the size of a target population, the range of obesity rates in your state or the number of hours in a week dedicated to physical education in area schools. It's important to include variables that will be measured once as well as those that will be measured or tracked over time to indicate the effort of your program. Tools and instruments for collecting quantitative data include counting systems, surveys, Excel spreadsheets and questionnaires. Upon analysis, these data will help identify whether or not you were able to achieve program goals. For example, quantitative data may identify a change in the number of fruit and vegetable servings consumed per day or whether the number of minutes students engaged in physical activity increased due to program efforts.

Qualitative data offers descriptive information that helps to explain the story behind the numbers. Often narrative in form, qualitative data help to describe a program participant's experience, behaviors, opinions, values, knowledge and intent as it relates to your initiative. Methods used for gathering qualitative evaluation data include key informant interviews, focus groups, surveys with open-ended questions, observations, photos and videos. Before the initiative, qualitative data may help identify the underlying beliefs of your community members about childhood obesity or better explain the patterns of obesity within your community indicated by quantitative data. After implementation, these data may help to explain how attitudes have changed, how health behaviors have changed, and why you achieved the intended results. For example, your quantitative data may indicate an increase in daily consumption of fruits and vegetables as snacks but the qualitative data from interviews with parents will help you to understand how or why this happened.

Successful Storytelling

There are many ways to tell your story. By documenting what you are doing and beginning data collection early in the process, you can tailor what results you share and how you share them. The way you tell your story depends on your audience. A lengthy final report may not be the best strategy to engage parents, but could be required for a state agency grant. Sharing results with local principals and school boards may be most effective in a fact sheet, but sharing with peers may occur through a trade association presentation. Results from every step in the process can be communicated with community partners. Strategies to disseminate outcomes can occur in a variety of ways including, but not limited to, lectures at local, state and national conferences; journal, magazine, newspaper and newsletter articles; blogs, tweets, Facebook posts, advertising messages or by creating **a visual story through the development of informative graphics.**

Additional Assistance in the Community

Evaluation need not be limited to one person. Expand the research resources available in your community. Think creatively about community partners who may be available to assist such as local universities, in particular, schools of public health who may be able to offer graduate students to assist in your evaluation design, data collection and analysis efforts. Also, look to other evaluation experts with experience in community-based evaluation programs, such as the local health department, state or local university extension office, or the SNAP-Ed program in your state. In addition, the CDC Prevention Research Centers are well positioned to assist with community-based evaluation, and many have a focus on areas of rural health.

Tools and Resources

- A **logic model** is a visual diagram that illustrates how your program will work. Developing a logic model is a recommended approach to help you make the clear connection between the policy and program changes that are planned and how they relate to the ultimate outcomes of improved nutrition and physical activity. Logic models communicate an organization's projects, programs, operations, activities and goals. The University of Wisconsin – Extension has developed a **self-study module** to explain the required steps to build a logic model.
- The **RE-AIM** model is a comprehensive tool to help structure your evaluation design in order to answer practical questions about the effect of program implementation on a target population and overall sustainability of the program as implemented. The RE-AIM includes the following criteria: whether the intervention reaches the priority population (reach), is effective in achieving intended outcomes (effectiveness), is adopted by providers and settings (adoption), and is implemented as intended (implementation) and maintained over time (maintenance).
- The **Northwest Center for Public Health Practice** (NWCPHP) provides training and technical assistance on research, evaluation and communication to public health organizations. They also offer contract evaluation services.
- The Rural Obesity Prevention Toolkit, developed by the Rural Assistance Center, includes a module on "Evaluating Program Efforts," which provides an overview of the different elements of evaluations to consider as you plan and implement your evaluation. The module also offers case studies and rural specific tools to guide your efforts.
- University of North Carolina Center TRT has developed a customizable **evaluation framework** to help conduct evaluation of programs and policies targeting environmental and behavioral obesity-related outcomes. The framework can be adapted to an obesity prevention program and results in a logic model, which will guide evaluation planning for the program or policy. An hour-long **"Practical Policy Evaluation" webinar** is also available.
- **CYFERnet Search** offers an innovative evaluation website with interactive tools, videos, online modules, and vetted resources designed to build the evaluation capacity of program providers, practitioners and evaluators, especially those working with at-risk youth and families. The website contains four primary areas — Learn, Build, Evaluate and Report — to help with each step of the process.
- **CDC** has developed a number of trainings and tools to guide you through the recommended evaluation framework including **webinars, workbooks, and an implementation and measurement guide.**

Evaluation Tools Tested in Rural Communities

- Food and Beverage Environmental Analysis and Monitoring System (Food BEAMs)
- National Collaborative on Childhood Obesity Research (NCCOR) Measures Registry
- PIN3 Neighborhood Audit Instrument
- Rural Active Living Assessment Tools (RALA):
  - Town-wide Assessment (TWA), focusing on a town's characteristics (e.g., school locations, geography, and other physical activity features and amenities
  - Program and Policy Assessment (PPA), focusing on community and school programs and policies
  - Street Segment Assessment (SSA), focusing on the walkability of rural areas
- System for Observing Fitness Instruction Time (SOFIT)
- System for Observing Play and Leisure Activity in Youth (SOPLAY)

Additional Resources and Case Studies

Below are examples of successful communities and the methods they have used to describe their milestones and results:

- The Robert Wood Johnson Foundation's Healthy Kids, Healthy Communities
- The Community Guide: What Works to Promote Healthy
- W. K. Kellogg Foundation Evaluation Handbook
- Department of Health and Human Services
  - Communities Putting Prevention to Work Initiative
  - State-Based Nutrition and Physical Activity Program to Prevent Obesity and Other Chronic Diseases Program
  - Racial and Ethnic Approaches to Community Health (REACH) Program
  - Community Transformation Grant (CTG) Program
- First Lady Michelle Obama's *Let's Move!* Campaign
- White House Task Force on Childhood Obesity

Evaluations Successfully Conducted in Rural Settings

Below are some examples of different evaluation reports from rural communities:

- Healthy Eating, Active Communities and Central California Regional Obesity Prevention Program: Final Evaluation Synthesis Report
- Approaches to Measuring the Extent and Impact of Environmental Change in Three California Community-Level Obesity Prevention Initiatives
- Alaska Farm-to-School Mini-grant Project Report
- Healthy & Active Communities: 2012 Evaluation Report

Conclusion

Conclusion

Despite numerous challenges, the communities profiled in this toolkit used their rural characteristics as an asset. They employed strategies that took advantage of their unique circumstances and situations and capitalized on close bonds and broad support. Amazing spirit and sense of pride for community was evident in every case. Small communities should not be underestimated, and these examples are a small sample of the remarkable work happening each day in rural communities across America. Working together to improve children's health brings communities together, and when a community does come together for change, no challenge is insurmountable.

References

1. Ogden CL, Carroll MD, Kit BK, Flegal KM. Prevalence of obesity and trends in body mass index among US children and adolescents, 1999-2010. *Journal of the American Medical Association.* 2012;307(5):483-490.

2. Childhood Obesity Facts. Centers for Disease Control and Prevention website. http://www.cdc.gov/healthyyouth/obesity/facts.htm. July 10, 2013. Accessed November 2013.

3. Ogden CL, Carroll MD, Curtin LR, McDowell MA, Flegal KM. Prevalence of overweight and obesity in the United States, 1999-2004. *Journal of the American Medical Association.* 2006;295(13):1549-55.

4. Lutfiyya MN, Lipsky MS, Wisdom-Behounek J, Inpanbutr-Martinkus M. Is rural residency a risk factor for overweight and obesity for U.S. children? *Obesity.* 2007;15(9):2348-2356.

5. Centers for Disease Control and Prevention. Vital signs: Obesity among low-income, preschool-aged children – United States, 2008-2011. *Morbidity and Mortality Weekly Report.* 2013;62(31):629-634.

6. The National Advisory Committee on Rural Health and Human Services. 2005 Report to the Secretary: Rural Health and Human Service Issues. U.S. Health Resources and Services Administration website. ftp://ftp.hrsa.gov/ruralhealth/NAC2005.pdf#page=43. April 2005. Accessed November 2013.

7. Rural Obesity Prevention Toolkit. Rural Assistance Center website. www.raconline.org/communityhealth/obesity. Accessed November 2013.

8. Food Deserts. U.S. Department of Agriculture, Agricultural Marketing Service website. http://apps.ams.usda.gov/fooddeserts/foodDeserts.aspx. Accessed January 16, 2014.

9. What is Rural? Rural Assistance Center website. www.raconline.org/topics/what-is-rural/. Accessed November 2013.

10. Laughlin L. *Who's Minding the Kids? Child Care Arrangements: Spring 2011.* Current Population Reports. Washington, DC: U.S. Census Bureau; 2013:70-135.

11. Smith L. *Child Care in Rural Areas: Top Challenges.* National Association of Child Care Resource & Referral Agencies website. http://www.naccrra.org/sites/default/files/default_site_pages/2012/rural_top_concerns_070910.pdf. 2010. Accessed November 2013.

12. Bellows L, Anderson J. The food friends: Encouraging preschoolers to try new foods. *Young Children.* 2006;61(3):37-39.

13. Nemours Health & Prevention Services. Nemours website. Best Practices for Healthy Eating: A Guide To Help Children Grow Up Healthy. Version 2. http://www.nemours.org/content/dam/nemours/www/filebox/service/preventive/nhps/heguide.pdf. 2008. Accessed November 2013.

14. American Academy of Pediatrics, American Public Health Association, and National Resource Center for Health and Safety in Child Care and Early Education. *Preventing Childhood Obesity in Early Care and Education: Selected Standards from Caring for Our Children: National Health and Safety Performance Standards; Guidelines for Early Care and Education Programs, 3rd Edition.* http://nrckids.org/CFOC3/PDFVersion/preventing_obesity.pdf. 2010. Accessed February 26, 2014.

15. National Resource Center for Health and Safety in Child Care and Early Education, University of Colorado Denver. *National Resource Center for Health and Safety in Child Care and Early Education: Achieving a State of Healthy Weight: A National Assessment of Obesity Prevention Terminology in Child Care Regulations 2010.* Aurora, Colorado; 2011. http://nrckids.org/default/assets/File/regulations_report_2010.pdf. Accessed March 1, 2014.

16. Committee on Obesity Prevention Policies for Young Children; Birch LL, Parker L, Burns A, eds; Institute of Medicine. *Early Childhood Obesity Prevention Policies.* Washington, DC: The National Academies Press; 2011. http://www.nap.edu/catalog.php?record_id=13124. Accessed March 1, 2014.

17. Benjamin Neelon SE, Briley ME; American Dietetic Association. Position of the American Dietetic Association: benchmarks for nutrition in child care. *J Am Diet Assoc.* 2011;111(4):607-615.

18. Berkenkamp J, Mader L. (2012). Farm to Childcare: Opportunities and Challenges for Connecting Young Children with Local Foods and Farmers. Institute for Agriculture and Trade Policy. http://www.iatp.org/documents/farm-to-child-care-opportunities-and-challenges-for-connecting-young-children-with-local-f . Accessed March 1, 2014.

19. Crawford PB, Gosliner W, Kayman H. The ethical basis for promoting nutritional health in public schools in the United States. *Prev Chron Dis.* 2011;8(5):A95.

20. Wechsler H, McKenna ML, Lee SM, Dietz WH. The Role of Schools in Preventing Childhood Obesity. *The State Education Standard,* National Association of State Boards of Education. 2004; 5:4-12.

21. Sheridan S, Witte A, Schroder B. Family-School Partnerships in Rural Schools: Engaging Families to Promote School Success. Webinar for U.S. Department of Education. 2012. http://r2ed.unl.edu/presentations/powerpoint/F-S%20Partnerships%20in%20Rural%20Schools%205-21-2012.pdf. Accessed March 1, 2014.

22. Smink J, Reimer M. Rural School Dropout Issues: Implications for Dropout Prevention. Clemson, SC: National Dropout Prevention Center/Network; 2009. http://www.dropoutprevention.org/sites/default/files/13_Rural_School_Dropout_Issues_Report.pdf

23. Johnson J, Strange M, Madden K. The Rural Dropout Problem: An Invisible Achievement Gap. Washington, DC: The Rural School and Community Trust; 2010. http://www.ruraledu.org/user_uploads/file/Rural_Dropout_Problem_2010.pdf. Accessed March 1, 2014.

24. Strange M, Johnson J, Showalter D, Klein R. Why Rural Matters 2011-12: The Condition of Rural Education in the 50 States. Washington, DC: The Rural School and Community Trust; 2012. http://www.pathwaylibrary.org/ViewBiblio.aspx?aid=21903

25. The Rural School and Community Trust. Rural Trust's Williams joins work on dropout prevention and recovery. *Rural Policy Matters.* 2012. http://www.ruraledu.org/articles.php?id=2843. Accessed March 1, 2014.

26. Schwartzbeck TD. Declining Counties, Declining School Enrollments. Arlington, VA: American Association of School Administrators; 2009. http://aasa.org/uploadedFiles/Policy_and_Advocacy/files/DecliningCountiesandEnrollment.pdf. Accessed March 1, 2014.

27. Herzog MJ, Pittman R. Home, family, and community: Ingredients in the rural education equation. *Phi Delta Kappan.* 1995;77(2):13-18. http://files.eric.ed.gov/fulltext/ED388463.pdf. Accessed March 1, 2014.

28. Benton D. Role of parents in the determination of the food preferences of children and the development of obesity. *Int J Obes Relat Metab Disord.* 2004;28(7):858-869.

29. Ventura AK, Birch LL. Does parenting affect children's eating and weight status? *Int J Behav Nutr Phys Act.* 2008;5:15.

30. Zaza S, Briss PA, Harris KW. *The guide to community preventive services: What works to promote health?* New York: Oxford University Press; 2005.

31. National Institute on Out-of-School Time. *Making an impact on out-of-school time: A guide for Corporation for National Service programs engaged in after school, summer, and weekend activities for young people.* Washington, DC: Corporation for National Service and National Institute on Out-of-School Time; 2000.

32. American Youth Policy Forum. *Helping Youth Succeed Through Out-of-School Time Programs.* Washington, DC: American Youth Policy Forum; 2006. http://www.aypf.org/wp-content/uploads/2012/03/publications/Helping%20Youth%20OST%202006.pdf. Accessed March 1, 2014.

33. Hall G, Wiecha J, Gannet E, Dennehy J, Gruber D. *Program Practices: An Investigation of Physical Activity and Healthy Eating Standards and Practices in Out-of-School Time Programs.* National Institute of Out-of-School Time website. http://www.niost.org/Completed-Projects/program-practices-an-investigation-of-physical-activity-and-healthy-eating-standards-and-practices. Accessed March 1, 2014.

34. Afterschool Alliance website. *Afterschool Alert: Issue Brief, No. 8.* 2004. http://www.afterschoolalliance.org/issue_8_fit.cfm. Accessed March 1, 2014.

35. Collins A, Bronte-Tinkew J, Logan C. *Strategies for Improving Out-of-School Programs in Rural Communities,* #2008-18. Child Trends website. May 2008. http://www.childtrends.org/wp-content/uploads/2008/05/Child_Trends-2008_05_05_RB_RuralOST.pdf. Accessed March 1, 2014.

36. Yousefian A, Ziller E, Swartz J, Hartley D. Active living for rural youth: addressing physical inactivity in rural communities. *J Public Health Manag Pract.* 2009;15(3):223-231.

37. Hyde E. *The Afterschool Supper Program: An Oregon Case Study.* Partners for a Hunger-Free Oregon website. http://oregonhunger.org/files/reports/ASMSP%20Case%20Study.pdf. 2009. Accessed March 1, 2014.

38. National Association of Counties. Rural Obesity: Strategies to Support Rural Counties in Building Capacity. The Leadership for Healthy Communities website. http://www.leadershipforhealthycommunities.org/images/stories/ruralobesity_naco.pdf. September 04, 2008. Accessed November 2013.

39. Sharkey JR, Johnson CM, Dean WR, Horel SA. Association between proximity to and coverage of traditional fast-food restaurants and nontraditional fast-food outlets and fast-food consumption among rural adults. *Int J Health Geogr.* 2011;10:37.

40. Committee on Prevention of Obesity in Children and Youth; Food and Nutrition Board; Board on Health Promotion and Disease Prevention. Koplan JP, Liverman CT, Kraak VI, eds. *Preventing Childhood Obesity: Health in the Balance*. Washington, DC: The National Academies Press; 2005.

41. Shape Up Somerville. Somerville, MA, website. http://www.somervillema.gov/departments/health/sus. Accessed November 2013.

42. Cohen JF, Kraak VI, Choumenkovitch SF, Hyatt RR. The CHANGE Study: A Healthy-Lifestyles Intervention to Improve Rural Children's Diet Quality. *J Acad Nutr Diet.* 2014;114(1):48-53.

43. Crawford PB, Schneider C, Martin AC, et al. Community-wide strategies key to preventing childhood obesity. *California Agriculture*. 2013;67(1):13-20.

44. Larson NI, Story MT, Nelson MC. Neighborhood environments: disparities in access to healthy foods in the U.S. *Am J Prev Med.* 2009;36(1):74-81.

45. Flower KB, Willoughby M, Cadigan RJ, Perrin EM, Randolph G; Family Life Project Investigative Team. Understanding breastfeeding initiation and continuation in rural communities: a combined qualitative/quantitative approach. *Matern Child Health J.* 2008;12(3):402-414.

46. Schwantes T. Using Active Living Principles To Promote Physical Activity in Rural Communities. Active Living Research website. http://activelivingresearch.org/using-active-living-principles-promote-physical-activity-rural-communities. February 2010. Accessed March 1, 2014.

47. Barlow, SE et al. Expert recommendations for the treatment of child and adolescent overweight and obesity. *Pediatrics.* 2007;120(Supplement 4): S254-S288.

48. HRSA Office of Rural Health Policy. http://www.hrsa.gov/ruralhealth/. Accessed November 2013.

49. Goins RT, Williams KA, Carter MW, Spencer M, Solovieva T. Perceived barriers to health care access among rural older adults: a qualitative study. *J Rural Health*. 2005;21(3):206–213.

50. Cohen GM, Irby MB, Boles K, Jordan C, Skelton JA. Telemedicine and the pediatric obesity treatment: review of the literature and lessons learned. *Clin Obes*. 2012;2(3-4):103-111.

51. Kumanyika SK, Parker L, Sim LJ, eds.; Committee on an Evidence Framework for Obesity Prevention Decision Making; Food and Nutrition Board; Institute of Medicine. *Bridging the Evidence Gap in Obesity Prevention: A Framework to Inform Decision Making*. Washington, DC: The National Academies Press; 2010.

52. Stewart EE, Fox C. Encouraging patients to change unhealthy behaviors with motivational interviewing. *Fam Pract Manag*. 2011;18(3):21-25.

53. Shaikh U, Cole SL, Marcin JP, Nesbitt TS. Clinical management and patient outcomes among children and adolescents receiving telemedicine consultations for obesity. *Telemed J E Health*. 2008;14(5):434-440.

54. Irby MB, Boles KA, Jordan C, Skelton JA. TeleFIT: adapting a multidisciplinary, tertiary-care pediatric obesity clinic to rural populations. *Telemed J E Health*. 2012;18(3):247-249.

55. Samuels and Associates. Healthy Eating, Active Communities and Central California Regional Obesity Program Final Evaluation Synthesis Report. The California Endowment website. http://www.calendow.org/uploadedFiles/Publications/Publications_Stories/HEAC%20CCROPP%20Final%20Report%202010.pdf. December 2010. Accessed March 2, 2014.

56. Northwest Center for Public Health Practice. *Data Collection for Program Evaluation*. Northwest Center for Public Health Practice website. http://www.nwcphp.org/training/opportunities/online-courses/data-collection-for-program-evaluation. Accessed March 2, 2014.