## Contents

I. Introduction and Overview ................................................. 1

II. Getting Started .......................................................... 4

III. The Role of Families in Growing Healthy Readers ............ 8

IV. Health and Learning Issues at Each Developmental Milestone 10

- **Born Healthy** .......................................................... 10
  Community Solution: B’more for Healthy Babies Promotes Public Awareness to Reduce Infant Mortality
  *Baltimore, Maryland*

- **Thriving at Three** .................................................... 14
  Community Solution: Putting the Pieces Together for Two Generations
  *Atlanta, Georgia*

- **Ready at Five** .......................................................... 18
  Community Solution: Mental Health Consultation in Child Care Programs Supports Kindergarten Readiness
  *Alameda County, California*

- **Present and Engaged in the Early Grades** ..................... 22
  Community Solution: Health-Related Strategies Reduce Chronic Absence
  *Oakland, California*

V. Strategies for Improving Health and Learning from Birth through Third Grade 25

- **Ensuring Health Coverage and Family-Centered Medical Homes** 25
  Community Solution: Medical Homes Promote Reading Readiness
  *Salt Lake City, Utah*

- **Expanding Oral Health Services** .................................. 29
  Community Solution: Making Milwaukee Smile
  *Milwaukee, Wisconsin*

- **Providing Screening for On-Track Learning: Developmental Screening and Screenings for Hearing, Vision and Lead Poisoning** 31
  Community Solution: Combining State and Federal Funds to Prepare Communities to Use Developmental Screening Tools
  *Georgia*
Improving Nutrition and Physical Activity 35
Community Solution: Providing Breakfast in the Classroom
Queen Palmer Elementary School
Colorado Springs, Colorado

Creating Safe and Healthy Home Environments 38
Community Solution: Green, Safe and Healthy Homes Support
Health and Learning
Baltimore, Maryland

VI. Appendices: Resources for Understanding the Issues in Communities 41
Appendix A: The Connecticut Framework 41
Appendix B: Resources for Specific Sections of the Starter Kit 41

Endnotes 44
Acknowledgments 49
We tend to think of reading as a simple process of learning language, letters and sounds, an easy and natural part of growing up. Yet reading is complex; it relies on a child’s ability to focus attention, sit still, recognize sounds and symbols, hold images and associations in memory, follow directions, and process meaning from spoken and written words. Reading relies on the development of the whole child—including the closely entwined aspects of a child’s physical, social and emotional, as well as cognitive health.

Good health is much more than the absence of disease. A child’s capacities begin to develop before birth and continue to develop rapidly, fueling and shaping readiness to take on the tasks of learning and schooling. Children’s brains and bones, energy levels and mobility change and mature through the early years of life. This rapid development, including the wiring of the brain, arises from the integration of a child’s physical, social and emotional health. Relationships with consistent and caring adults nurture and influence each of these connected aspects of healthy development, which is directly linked to a child’s learning capacity and progress. If children are to be able to read proficiently by the end of third grade, they need to be healthy and developing language, literacy and reading skills at an appropriate pace.

Each child develops at a unique pace, and is more advanced in some areas than others at any given time. Beyond individual differences, however, income and racial disparities create profound differences in children’s readiness for and success in reading. According to the 2011 National Assessment of Educational Progress (NAEP), low-income students’ reading achievement significantly trails that of their more affluent peers: 83 percent of all low-income fourth graders score below proficient compared to 67 percent of all fourth grade children. Half of all fourth graders from low-income families score below the “basic” reading level compared to one-third of all fourth graders.¹ For children of color from low-income families, the reading gap is even greater.² These young children also face substantial disparities in their health conditions, access to health insurance and quality of care compared to their white peers from higher-income families. Achieving equity in children’s health will go a long way toward closing the gap in children’s academic success.³

The Campaign for Grade-Level Reading is designed to help communities with significant numbers of children from low-income families, including low-income families of color, English Language Learners and children with disabilities, address and overcome these challenges. The
Campaign seeks to ensure that these children develop appropriately, are prepared for and engaged in learning, and are able to read proficiently by the end of third grade.

Who is this Starter Kit for?

This Starter Kit is the first of a series of resources for Sponsoring Coalitions in the Grade-Level Reading Communities Network across the country. A draft version was first presented at the Campaign for Grade-Level Reading Communities Network Conference in Denver, June 30–July 2, 2012, as an introduction to the health issues that affect literacy development. It is intended to serve as a catalyst to assist communities in improving opportunities for children to achieve reading proficiency by the end of third grade by integrating health strategies in support of school readiness, improved attendance and summer learning. It is designed to help Sponsoring Coalitions identify the health and developmental issues that contribute to low levels of grade-level reading achievement among children from low-income families. As the work progresses, additional supports will be available to help Coalitions plan and implement strategies for improving children’s health as part of the plan to move the needle on grade-level reading.

How is the Starter Kit organized?

The Starter Kit is organized to help introduce factors that affect children’s health and health care from the prenatal period through the early grades, identify why each is important and its particular relevance to reading proficiency, and offer examples of promising approaches to address these critical health challenges. It includes tools for Sponsoring Coalitions to uncover the key health issues in the community that struggling readers face, assemble a rich information platform and move toward selecting priorities for action. Illustrative “Community Solutions” from places that are having success in tackling some of these health issues also illuminate how progress is being made.

Section II: Getting Started is designed to help Sponsoring Coalitions begin the work. As the CSAP process has demonstrated, the work within each community requires strategic planning and action built on a strong evidence base. Understanding the health concerns that affect children’s learning, as well as effective practices for addressing them, will enable Sponsoring Coalitions to move ahead. This section offers strategies for identifying key health partners who already provide direct interventions for children that affect grade-level reading, as well as valuable opportunities for reaching out to parents and promoting healthy behaviors that contribute to literacy. Collaborating with these health partners will expand access to relevant health information and help shape and enhance efforts to address health concerns. Health partners may also help assess community health assets and gaps and draw on existing data to provide a portrait of the health issues affecting children in the community. These data, taken together, can begin to point toward action and small wins that can lead to bigger change.

Section III: The Role of Families in Growing Healthy Readers focuses on the central role that families play in nurturing children’s healthy development. It suggests where to look for information to assist the Coalition in understanding what families in the community know about the linkages among children’s health, development and reading, and current efforts to boost families’ understanding and support of their children’s health. By outlining families’ critical contributions to supporting their children’s overall health, this section also describes additional ways to find information relevant to determining impediments to children’s healthy development and reading success.

Sections IV and V present two complementary approaches to understanding how children’s health and development are connected to learning to read.

Section IV: Health and Learning Issues at Each Developmental Milestone discusses children’s developmental trajectory at four critical stages between birth and third grade reading proficiency: Born Healthy, Thriving at Three, Ready at Five, and Present and Engaged in the Early Grades. Although each child’s developmental steps are uniquely sequenced, it is important to ensure that
children develop the critical capacities at each milestone in order to make progress toward reading well by the end of third grade. For each developmental stage, the Starter Kit provides evidence about how children’s healthy development at that stage is related to grade-level reading. It points to the settings in which children at this age spend significant time, and the health and learning issues that are likely to arise. These sections also identify the types of information that Sponsoring Coalitions can collect in their communities to help understand local issues, assets and challenges related to children’s healthy development at this stage. Finally, for each developmental milestone, the Starter Kit provides examples of how specific communities are improving the links between health and reading.

Section V: Strategies for Improving Health and Learning from Birth through Third Grade, tackles five health issues that affect learning across the developmental milestones:

- **Ensuring health coverage and family-centered medical homes**—connecting children and their families to health insurance and a regular source of primary care advances preventive and well-child care and can reduce lost opportunities for learning due to absence from school and early education programs.

- **Expanding oral health services**—maintaining a child’s oral health affects language and speaking, reduces school absences and emergency room care, and contributes to a sense of confidence essential for learning.

- **Providing screening for on-track learning**—regular assessment of developmental progress, vision and hearing, and testing for lead poisoning can identify learning challenges and help link families to appropriate interventions and treatment to keep children progressing on track toward school readiness and learning to read.

- **Improving nutrition and physical activity**—starting before birth and extending throughout childhood, children need sufficient and nutritious food to foster their growth, brain development and alertness, and to fuel active learning and engagement. Additionally, emerging evidence links increased physical activity to increased capacity for learning.

- **Creating safe and healthy home environments**—Children need to live in homes free of toxins that trigger debilitating illnesses such as asthma, which often leads to chronic absence, and lead poisoning, which impedes healthy growth and learning. Weapons and other safety hazards can also seriously disrupt developmental progress and learning.

Understanding the status of these issues, and the strategies that address them in communities, can suggest opportunities for Coalitions to enhance children’s health and reduce impediments to learning. The Starter Kit shows how each strategy is linked to children’s reading success, especially for children from low-income families. It also suggests data sources that can help fill out the picture of health assets and service gaps that provide the platform for future action. Each area also highlights a Community Solution to illustrate a promising on-the-ground effort.

The health challenges facing children in low-income communities can seem overwhelming. The Starter Kit highlights promising strategies to show that communities can make a difference and move the needle on children’s health to improve grade-level reading.

Let’s get started!
The Core CSAP Assurances

1. We understand the problem.
2. We know our destination.
3. We have a strategy.
4. We can get the data we need to set baselines, establish targets, track progress and promote performance accountability.
5. We are aligning and connecting with other important initiatives.
6. We have the support, resources and capacity to execute, implement, and get this done.

In developing Community Solutions Action Plans (CSAPs), Sponsoring Coalitions focused on school readiness, attendance and summer learning as issues that affect grade-level reading. A closer look at children, their families and their communities shows that children in low-income families are also subject to health disparities: they have more physical and mental health problems that limit their activities, and receive less, and lower-quality, medical care—and fare less well as a result—than children from higher-income families who have the same health problems. Children who experience health disparities are less likely to be successful in school. Given this strong evidence, the Campaign for Grade-Level Reading recognizes that it cannot move the needle on third grade reading without addressing the important health issues which impact children’s development and ultimately how well they learn and succeed in school.

As Sponsoring Coalitions pivot from planning to performing, the CSAP process with benchmarks for school readiness, attendance and summer learning will lend itself well to the integration of health strategies in order to meet these benchmarks. The CSAP model and assurances will serve as a good frame to examine thoughtfully any new issue communities may choose to integrate into their long-range plans.

To aid these efforts, this Starter Kit is designed as a resource to support the work to reduce health disparities that affect children’s reading success and help move toward action to strengthen children’s healthy development. “Growing Healthy Readers” describes the relationship between children’s health and reading success at
each stage from birth through third grade: *Born Healthy, Thriving at Three, Ready at Five*, and *Present and Engaged in the Early Grades*. Coalitions can reach out to families, health departments, health providers and other community groups to identify barriers, promote healthy behaviors and prevent serious health problems that limit children’s ability to be successful in school.

The Campaign is suggesting an approach to integrate children’s health into CSAPs, recognizing that Network Communities are at different points in their efforts and that the CSAP process did not initially address health issues. Now is the time to consider how doing so will aid in the achievement of overall grade-level reading goals. Some communities may have a robust health agenda underway; others may be loosely connected to health partners; and some may not have considered health issues at all. No matter where communities are on this continuum, a dialogue between Sponsoring Coalitions and other partners, using the Starter Kit as a resource, can help foster the design of a local approach to improving children’s health and learning.

The following steps are a suggested guide for the planning process in the community:

1. **Identify** a subgroup of the CSAP team who have an interest in children’s health. Augment that team with people who work in this arena, such as Health Department staff, a Head Start representative, a staff member from a Federally Qualified Health Center (FQHC), a representative of the school district’s health services department, and a health care provider such as a nurse practitioner or home visitor. Identify someone from the Sponsoring Coalition to take the lead on health, with the goal that the individual can articulate the link between health and grade-level reading and have credibility, ideally with both the education and health communities. This may also create the opportunity to broaden Coalitions to include someone new to serve in this role.

2. **Scan** to understand what other work is going on to address children’s health. What public or private agencies or organizations provide specific services or programs locally? “The Inventory of Critical Child Health Issues, Resources, Strengths, and Needs” (see Appendix A-2) can help with this search. Is there a federal Project LAUNCH grant, for example? Or an Early Childhood Comprehensive Systems grant? These federal grants are designed to bring stakeholders together in an effort to ensure that children are healthy and developing on track and improve services and systems to better meet the needs of children and families. Is the United Way or another organization focusing on children’s health issues? Is there an Early Head Start or Public Health Maternal-Child Nursing program? Wherever possible join and strengthen another community effort, rather than starting over.

While the link between children’s health and school success is well documented, the health care system and early care and education systems are not well connected in many communities. Often stakeholders who sit outside of these systems can serve as neutral conveners who can jumpstart a conversation about aligning efforts. Sponsoring Coalitions are well positioned to begin the assessment and dialogue around the issues concerning children’s health and the link to success in the early grades.

3. **Begin** to gather information to understand how health issues affect children. There are some basic indicators of children’s health and well-being that are helpful as a starting point. “The Health Related Indicators for School Readiness” (see Appendix A-2) is a compilation of common data sources. This inventory will be a useful tool to get started. The Annie E. Casey Foundation’s KIDS COUNT website is also an excellent resource: [http://datacenter.kidscount.org/data/bystate/Default.aspx](http://datacenter.kidscount.org/data/bystate/Default.aspx). Check with the state (or county) health department for additional data to inform the work. The Health System Performance Indicators and data availability vary by state, and it may be necessary to check both state and local sources for the complete...
data. Some data may be difficult to obtain and Coalitions may want to develop a plan to gather additional information.

The conclusion of each section in the Starter Kit includes questions that are meant as a helpful guide and are not considered mandatory data elements to collect. Each coalition will decide which data are most relevant for its community.

4. **Convene** a group of people in the community who are knowledgeable about children’s health. Talk with parents, early childhood/Head Start staff, school nurses, physicians, representatives of the American Academy of Pediatrics and/or the American Academy of Family Physicians and others. Use these conversations to map:

   a. What are the health conditions of children from low-income families at each of the following milestones of healthy development for grade-level reading?
      - Born Healthy
      - Thriving at Three

   b. Are there disparities between conditions of children from low-income households/communities and those from higher-income households/communities at each of these milestones?

   c. How do the following strategies to support children’s health affect their ability to become successful readers by the end of third grade? (See Section V on page 25 of this Starter Kit for a more detailed description of these issues.)
      - Ensuring health coverage and family-centered medical homes
      - Expanding oral health services
      - Providing screenings for on-track learning, including developmental screening and screening for vision, hearing and lead poisoning
      - Improving nutrition and physical activity
      - Creating safe and healthy home environments

Use the chart below to review and understand the availability of key services and supports for children in the community:

---

<table>
<thead>
<tr>
<th>Born Healthy?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Adequate Prenatal Care</td>
</tr>
<tr>
<td>- Adequate Nutrition</td>
</tr>
<tr>
<td>- Family-Centered Medical Home</td>
</tr>
<tr>
<td>- Lead Screening</td>
</tr>
<tr>
<td>- Hearing/Vision Screening</td>
</tr>
<tr>
<td>- Developmental Screening and Follow-Up</td>
</tr>
<tr>
<td>- Dental Home</td>
</tr>
<tr>
<td>- Safe and Healthy Home Environment</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Thriving at Three?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Family-Centered Medical Home</td>
</tr>
<tr>
<td>- Lead Screening</td>
</tr>
<tr>
<td>- Hearing/Vision Screening</td>
</tr>
<tr>
<td>- Developmental Screening and Follow-Up</td>
</tr>
<tr>
<td>- Dental Home</td>
</tr>
<tr>
<td>- Safe and Healthy Home Environment</td>
</tr>
<tr>
<td>- Nutrition and Physical Fitness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ready at Five?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Family-Centered Medical Home</td>
</tr>
<tr>
<td>- Lead Screening</td>
</tr>
<tr>
<td>- Hearing/Vision Screening</td>
</tr>
<tr>
<td>- Developmental Screening and Follow-Up</td>
</tr>
<tr>
<td>- Dental Home</td>
</tr>
<tr>
<td>- Safe and Healthy Home Environment</td>
</tr>
<tr>
<td>- Nutrition and Physical Fitness</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Present and Engaged in the Early Grades?</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Family-Centered Medical Home</td>
</tr>
<tr>
<td>- Hearing/Vision Screening</td>
</tr>
<tr>
<td>- Developmental Screening and Follow-Up</td>
</tr>
<tr>
<td>- Dental Home</td>
</tr>
<tr>
<td>- Safe and Healthy Home Environment</td>
</tr>
<tr>
<td>- Nutrition and Physical Fitness</td>
</tr>
</tbody>
</table>

---

1. Born Healthy?
2. Thriving at Three?
3. Ready at Five?
4. Present and Engaged in the Early Grades?
5 Discuss the findings with members of the team:
   a. What issues arose most frequently?
      • What new information about children’s health was gathered?
   b. Who needs to be at the table?
      • Who else needs to be added to the team?
      • What other public or private organizations need to be involved to improve children’s health?

6 Determine whether there are actions the team could take now to strengthen children’s health and development to support improved grade-level reading outcomes.
   a. Does the information gathered point to some action that could be taken now to make a difference in children’s health and learning in the community? Often simple no-cost or low-cost actions are a way to build momentum and gain early enthusiasm and support for the work. Is more information necessary before moving to action?
      • Make the case for integrating health into the CSAP as it is refined.
      • What issues will the Coalition address?
      • What action steps are necessary to begin the process?

7 Begin planning to address the priority areas in the community
   a. What data will help to define how this issue affects children?
   b. What is the desired outcome for the priority/ies that have been identified?
   c. What strategies will help move the needle on this issue?
   d. Is there another group that is engaged in the issue? Are there state-level policies/programs that impact the effort?
   e. What resources will be necessary to implement and sustain the strategies?
   f. How will the results of the work be measured?

This section has been a brief overview of how to get started. For an in-depth guide on conducting an assessment of the effectiveness of child health systems and available health resources, see *A Framework for Child Health Services* (see Appendix A-1), which includes work in one state to compile the data in a meaningful way. It may be useful to communities in the process of selecting a health issue to prioritize. The Framework highlights the links between children’s health and readiness to succeed in school. Accompanying the Framework is a Tool Kit that provides a comprehensive guide to implementation of the Framework’s recommendations developed by the Child Health and Development Institute of Connecticut and published in 2011: [www.chdi.org/publications.php](http://www.chdi.org/publications.php).
The Role of Families in Growing Healthy Readers

SECTION III

Introduction

As children’s first and continuing teachers, families are also key advocates for children’s healthy development and capacity for learning. They nurture growth, teach by example, and become attuned to children’s health and developmental status. Families’ support for children’s health and learning begins before birth, when mothers seek medical care and develop a relationship with a provider that helps them understand that they are “growing their baby’s brain,” and that they can have a strong impact on their children’s development and ability to learn. Parents and other family members—and their interactions with their children—are critical factors in ensuring children’s health throughout the period from birth through third grade.

What can parents do to support children’s healthy development?

All families want the best for their children and want them to be successful readers. There is evidence that specific behaviors on the part of families strongly influence the development of reading proficiency for their children by the end of third grade. Parents can:

- Nurture young children and respond to their needs. Interaction with a caring adult during the first year of life forms the foundation of children’s skills in communicating and helps them begin to distinguish words.

- Make sure they are enrolled in health insurance and have a regular source of preventive medical care, including immunizations and comprehensive screening for on-track development, hearing and vision, and lead poisoning.

- Talk with their children. Parents' verbal interactions with young children enable them to develop vocabulary, which leads to greater proficiency in reading. In their seminal study of language development in young children, Hart and Risley found that children from the most economically advantaged families hear as many as 15 million more words by age three than children from the most economically disadvantaged families. Follow-up studies of the same children at age nine showed a very tight link between the academic success of a child and the number of words the child's parents spoke to them by age three.

- Read with children daily, from an early age. Reading aloud to young children promotes the development of
language and other emergent literacy skills, which in turn helps children prepare for school.13

- Teach children healthy habits, by example and by setting consistent limits throughout the period from birth through third grade. Parents who set regular routines—including sleep, nutrition and oral health—for their children are supporting physical health that enables children to learn. Continued support for reading at home (by limiting television time, for example) leads to increased reading proficiency: children who read even 10 minutes a day outside of school experience substantially higher rates of vocabulary growth between second and fifth grade than children who do little or no reading.14

- Monitor concerns about their child’s health and development, and advocate with professionals on their behalf. When physicians ask about parents’ concerns regarding their children’s development, the parents’ responses can be used to inform decisions about the need for additional services and supports.15

For many low-income families, these roles in supporting children’s healthy development and learning may be unfamiliar and even daunting. Pediatricians and other health providers support this parental role by inquiring about what parents notice and what concerns they have; by responding to parents’ questions and concerns and encouraging them to teach their children healthy behaviors; and by encouraging parents to act as advocates for their children with other professionals.

What information can help Sponsoring Coalitions understand the role of families in growing healthy readers?

Parents are important sources of information about their involvement in children’s health, development and learning. Coalitions can find out how families are involved with their children’s health by surveying families; by working with community organizations to convene discussions in homes, family support centers, or other places parents go; and by talking with home visitors, preschool providers, teachers and others who work directly with parents.

- How many families with very young children are served by evidence-based home visiting programs (such as Nurse-Family Partnership, Healthy Families and Parents as Teachers) that help families develop positive verbal interactions with young children?

- Do pregnant teens and teen mothers have access to health and social services that are essential to interrupting the intergenerational transmission of poverty?16

- Do families have access to Moms’ Clubs or similar activities that bring parents together to talk about their children’s health and development? How many families participate in these groups?

- How many pediatricians use questionnaires such as the Bright Futures materials to help parents prepare for well-child visits and advocate for their children?

- How many pediatricians and family-centered medical homes use Reach Out and Read to help families read to/with their children from an early age?

- What kinds of services and activities do public libraries (or other organizations in the community) provide to help parents read to their children daily and learn about their health?

As Sponsoring Coalitions continue to work to improve children’s health and learning, it is important to stay connected to families. In their role as first and continuing teachers and advocates for their children’s healthy development, families are key players in the process of growing healthy readers.
This section provides information about children’s healthy development at four specific stages between birth and the end of third grade: Born Healthy, Thriving at Three, Ready at Five, and Present and Engaged in the Early Grades. It includes suggestions for information to collect about the strengths and challenges facing communities in these areas.

**BORN HEALTHY**

**Introduction**

Since learning begins at birth, the prenatal period and the first weeks and months of life set the stage for learning success. Children who are born on time (after the 37th week of pregnancy) and at a healthy weight (about 5.5 lbs or greater) are described as born healthy; that is, they are more likely to survive the first year of life.

**How is children’s healthy development at birth related to grade-level reading?**

The National Scientific Council on the Developing Child, a leader in brain research and the science of early childhood development, writes, “The basic architecture of the brain is constructed through an ongoing process that begins before birth and continues into adulthood. Careful and continuous monitoring of children’s development, beginning before birth and continuing through early childhood, is necessary to ensure that children can reach their full potential. Fully meeting this goal requires prenatal care for all pregnant women and sustained access to a consistent source of primary health care for all children.”

Pregnancy is a time when low-income prospective mothers are both reachable and teachable. Mothers may seek prenatal care from private providers, Federally Qualified Health Centers (FQHCs), hospital-affiliated prenatal clinics and birthing centers. Many also seek food support from the Women, Infants and Children (WIC) program and income supports such as Temporary Assistance for Needy Families (TANF) from their local Departments of Social Services. By strengthening prenatal care and supports for families in a baby’s first few months of life, community leaders have an opportunity to contribute to physical and mental health for mothers and babies—and to support care for babies that leads to optimal brain development, improved health and increased capacity for learning.
The infant mortality rate—the percentage of infants who do not survive to reach their first birthday—is an indicator of the way a community mobilizes to support its most vulnerable children and families. For babies who are born at a healthy weight and at the conclusion of a full-term pregnancy, the most common cause of infant mortality is unsafe sleep. The American Academy of Pediatrics recommends that families follow the ABCs of safe sleep: Alone, on their Back and in a Crib. As community leaders send a consistent message to parents about the importance of safe sleep—and reinforce that message in a variety of venues—infant mortality rates decrease.

Where do children spend time at this stage? What health and learning issues may emerge?

Most very young children and their mothers are at home—their own or that of a friend or relative—during the first weeks of life. During this critical time, there is an opportunity to strengthen parenting skills through interventions tailored to specific needs.

- Evidence-based home visiting programs, such as the Nurse-Family Partnership program and Healthy Families America, serve families at highest risk of poor birth outcomes and of child maltreatment, such as single teen mothers. Some of these programs begin working with mothers during pregnancy and continue until a child is between 2–5 years old.

- For families with fewer risk factors, communities may want to establish “warm lines” that parents can call for information and advice on issues related to child development and care.

- Moms’ Clubs are groups of mothers with infants who meet regularly, using curricula that help reduce maternal depression and model successful parenting practices, including verbal interaction with babies. Health care providers, community organizations, or clinics can sponsor Moms’ Clubs; many groups decide to continue meeting as their babies grow and develop, providing a good opportunity to introduce and model the importance of reading.

- Baby Basics, a guide to a healthy pregnancy written for mothers with third-to-fifth-grade reading levels, is a tool for educating mothers, stimulating conversations between women and their physicians, increasing mothers’ active participation during prenatal care visits, and reducing unnecessary trips to the emergency

Within a couple of months after birth, a healthy infant will demonstrate progress across developmental domains:

- **Language and communication (receptive and expressive language)**
  She will look at you, even if briefly, when you face her, and make some sounds other than crying.

- **Fine and gross motor coordination**
  He will look at his own hands; and will try to keep his head steady.

- **Self-help**
  She will usually open her mouth when she sees a bottle, breast or pacifier.

- **Behavior (social and emotional development)**
  He will smile back when his mom smiles at him, at least sometimes.

Many children can do much more. If a child does not show these behaviors within the first two months, it is important to look more closely. A good developmental screening will help to understand if developmental issues are getting in the way of learning and growth.
room during pregnancy. The book includes a “Pregnancy Planner” to help moms keep track of the baby’s development, appointments and due dates, and to help moms advocate for themselves in their prenatal visits. In addition to providing tools and information, Baby Basics’ authors hope that it will empower moms with greater health literacy and, in turn, will translate into a greater likelihood that mothers will read to and with their young children. (See Appendix B for more information.)

- Housing instability is a major issue for pregnant women in many low-income communities, as they may be unable to pay rent, make frequent moves, live doubled up and in overcrowded conditions, and/or experience periods of homelessness. One study in Baltimore found that these women have nearly three times the rate of preterm births and seven times the rate of babies born with low birth weight, when compared to all births in the city. Communities can work to expand the availability of safe, affordable housing and establish a priority eligibility for pregnant women in shelters and transitional housing.

- Reaching—and teaching—pregnant women and influencing them to change their behavior (including alcohol intake, smoking and illegal substance or prescription drug use during pregnancy) to protect their baby’s healthy development can be challenging. Community organizations that want to increase the number of babies born healthy can make progress in a public campaign if they send consistent messages and reinforce them in many settings. (See the Community Solution on page 13.)

What information can help Coalitions understand children’s healthy development at birth and in infancy in their communities?

- How many children are born in the community each year?
- How many are eligible for Medicaid benefits? How many are actually enrolled?
- How many are born to teen mothers?
- What is the rate of babies born healthy and at full term?
- What is the infant mortality rate in the community?
- How many families in the community are served by evidence-based home visiting programs?
COMMUNITY SOLUTION: B’more for Healthy Babies Promotes Public Awareness to Reduce Infant Mortality

Baltimore, Maryland

In Baltimore City, approximately 9,000 babies are delivered each year; 6,500–7,000 of these infants are eligible for Medicaid. Since 2009, the Baltimore City Health Department (BCHD), in partnership with the Family League of Baltimore City (FLBC), has led the B’more for Healthy Babies (BHB) initiative to achieve a significant and sustained reduction in infant mortality, reversing a decade-long trend of increasing rates. In 2010 alone, 98 infants under the age of one died and many of these deaths were preventable. BHB’s overarching strategy includes aligned activities in four domains: Policy/Systems, Services, Community, and Family and Individuals.

BHB works to reduce sleep-related infant deaths through a campaign that promotes the ABCs of safe sleep: infants should sleep Alone, on their Backs and in a Crib. All eight birthing hospitals in the city show the SLEEP SAFE video, and mothers sign a form before they are discharged confirming that they have seen the video. Mass media activities and personal contacts from community health workers promoting safe sleep reinforce the message: in surveys conducted by BHB, mothers report hearing the message from their health providers, in community meetings and from home visitors. The SLEEP SAFE video is also shown every day at the court house (more than 120,000 potential jurors have been exposed to the message through this venue), the men’s Central Booking waiting area, all Department of Social Services sites, all BCHD WIC sites, in all home visiting programs, and the majority of the FQHC (Federally Qualified Health Center) sites in the city. It is also shown daily on the City’s public access cable channels.

BHB works intensively in two communities, partnering with neighborhood businesses, faith communities, schools and nonprofits to arrive at solutions that best address community needs. Teams meet monthly to organize activities and community mobilization efforts. The overall effort has expanded to include cross-sector task forces on:

- B’more Fit for Healthy Babies obesity prevention;
- Youth pregnancy;
- Youth advisory committee;
- Early entry into prenatal care;
- Literacy;
- Preventing substance-exposed pregnancy; and
- Housing

BCHD and FLBC are working to implement a city-wide system of evidence-based home visiting, using two models: Nurse Family Partnership and Healthy Families America.

Although infant mortality rates in Baltimore appear to be decreasing, with a 19 percent decrease in 2010, it remains to be seen whether this constitutes a general downward trend. The work is guaranteed to continue through 2013 with a $1 million grant from Care First BlueCross BlueShield, announced in May 2012.

A barbershop owner in Upton/Druid Heights, a BHB focus community, is a strong supporter of BHB who shows the SLEEP SAFE video in his shop every day. He says of the campaign, “You guys are angels. You walked into my shop just in time. If it had not been for you all, I would have placed my baby on her stomach to sleep and she was just coming home from the hospital, born prematurely. I can’t thank you all enough.”
THRIVING AT THREE

Introduction

During the first few years of life, the brains and bodies of infants and toddlers grow and change at an astonishing rate. An infant goes from needing to have her head supported to being able to scribble with a crayon; from having no language to babbling and then stringing words together to express ideas; from virtually total physical dependence to being an active partner in getting dressed; and from sometimes smiling back to understanding emotions by watching faces and then engaging in pretend and real play with other children.

When children are on track in all of the developmental areas—cognition and intellectual development, receptive and expressive language, fine and gross motor coordination, pre-academic and academic skills, self-help and behavior (both conduct and mental health or social-emotional development), as well as having good vision and hearing—they are best primed to learn and to read well by the end of third grade.

Shortly after his third birthday, a healthy toddler will demonstrate progress across developmental domains:

- **Language and communication (receptive and expressive language)**
  He will be able to tell you which ball is big and which is little when shown two balls of different sizes, and talk in a way that half or more other people understand what he says.

- **Fine and gross motor coordination**
  She will be able to scribble with a crayon without going off the page much, and stand on one foot—and then the other—for a second.

By the time a child is three and a half, she will be able to demonstrate progress across these developmental domains:

- **Pre-academic and academic skills**
  He will start to be able to tell which simple words are alike (*set*-*set*) and which are different (*bit*-pit) and be able to say *penny* or *cent* when she is shown a penny.

- **Self-help**
  She will be able to put her shoes on the right feet most of the time, and usually use the toilet without being told.

- **Behavior (social and emotional development)**
  He will be able to play well with a group of children for 15 to 20 minutes, and sometimes do favors for parents or surprise them by helping out.23

Many toddlers are even more advanced. Toddlers who do not show at least these behaviors need a closer look, including a good developmental screening and perhaps additional testing to see if they have a developmental delay or disability that could benefit from early intervention.
How is children’s healthy development in the first three years related to grade-level reading?

Birth to three is a critical period with great potential for boosting a child’s development. A young child’s brain is wired for learning. If any of the developmental processes go awry, proficient reading by the end of third grade can become an elusive goal. According to the influential 2000 National Academy of Sciences’ report, From Neurons to Neighborhoods: “Compensating for missed opportunities, such as the failure to detect early difficulties or the lack of environments rich in language, often requires extensive intervention, if not heroic efforts, later in life. Early pathways, though far from indelible, establish either a story or fragile stage on which subsequent development is constructed.”

During this period, health factors play a critical role in supporting—or impeding—early learning that sets the stage for reading success:

• Infants and toddlers who are exposed to language-rich environments during this time period thrive and excel six years later. But a child with an unaddressed hearing problem or chronic ear infections may not hear enough words to propel her learning.

• Addressing hearing problems early is critical for developing strong reading skills. Uncorrected childhood hearing deficits are linked to lifelong problems with speech, language, academic performance and social/emotional development.

• A toddler with a chronic health issue such as asthma, which affects 6 percent of children under age five, may simply lack the energy to put toward learning.

These issues can be especially problematic for young children from low-income families—children who are less likely to have access to high-quality health care than their higher-income peers, and more likely to have unaddressed health or developmental issues.

Where do children spend time at this stage? What health and learning issues may emerge?

Children spend their time in homes and in child care settings, both formal and informal. To improve health and learning, it is essential to engage parents, family members, health care professionals and child care providers in supporting children’s healthy development. Key issues for healthy development include:

• Are sleeping arrangements clean and safe? Are the children’s environments free of environmental hazards, such as lead paint, chemical containers, drugs and medications?

• Is food nutritious and sufficient to nurture children’s brain and body?

• Do young children have opportunities for active play rather than spending long hours in front of a television?

• Are there age-appropriate toys and books in children’s environments?

High-quality child care settings can provide powerful supports for learning. Child care staff who are trained to understand child development, how children learn and grow, and the benefits of physical activity and healthy eating can reinforce learning and address potential problems at their first sign.

• States and communities can take steps to improve the quality of child care. For example, Los Angeles County’s Steps to Excellence Program identifies five “steps” (from meeting basic licensing requirements to excellence) in six areas: regulatory compliance, teacher-child relationships, the learning environment, identification and inclusion of children with special needs, qualifications and working conditions, and family and community connections.

Infants and toddlers should have regular well-child visits with a pediatrician or other health-care professional.
Parents can use these visits to communicate concerns about their children’s health, such as vision, hearing, illness or developmental progress.

Parents can follow up in partnership with the pediatrician to seek screening, testing and, if needed, diagnosis, treatment and services.

The screening can be completed in the doctor’s office—or shared from another setting (such as Early Head Start or Head Start)—to help parents find out if their child is developing on track or might need some help.30

Infants and toddlers often spend time in community settings with their parents or child care providers—for example, at playgrounds, parks and libraries.

Parks and recreation facilities can provide opportunities for healthy activities and physical exercise that promotes health, learning, fitness and a sense of well-being. Running, playing, learning games with rules, identifying objects and interacting with other children as well as adults all help develop skills that support good learning and contribute to grade-level reading achievement.

Libraries provide books as well as a ready supply of resources that support daily reading to young children, a simple act that improves children’s literacy.31 Libraries can also provide materials to help parents support their children’s health and brain development—from stories about healthy eating to fun activities that promote coordination and problem-solving.

What percentage of young children have been identified as having a disability or developmental delay?

Is there information available about how many infants and toddlers live in families where “food insecurity” (lack of access to sufficient food at all times) or obesity is an issue?

How many infants and toddlers with vision, hearing or dental problems are identified and receive effective interventions by their third birthday.

Information about strategies:

How many children ages 0–3 have either public or private health insurance coverage?

How many children under age three are enrolled in the local Early Intervention program through the Individuals with Disabilities Education Act? If overall enrollment is less than the national average (2.67 percent in 2009), Coalitions might want to increase efforts to identify and help very young children who are falling behind developmentally.32

What percentage of eligible families are enrolled in food programs that benefit infants and toddlers—such as Food Stamps (SNAP), WIC and the Child Care Food Program?

Do most families, especially those with the fewest resources and those who live in the lowest-income neighborhoods, have ready access to parks and safe outdoor places for their children to play and exercise?

---

What information can help Coalitions understand children’s healthy development at age three in their communities?

Information about infants and toddlers:

• How prevalent are chronic health conditions among infants and toddlers? For example, allergies, asthma, tooth decay, epilepsy (seizures) or heart disorders?
Families of infants or toddlers who need a boost to maximize health and learning often struggle, not with the absolute lack of services, but with figuring out how to navigate the many different programs and services with differing eligibility requirements to get their children what they need.

This is why the Atlanta Civic Site—which serves five urban, low-income, primarily African-American neighborhoods in southwest Atlanta—uses a two-generation approach to support young children and their families. Recognizing that children do best when they are part of a safe, stable and nurturing family and community, the Civic Site partnered with local residents and organizations to create a comprehensive Early Learning and Literacy Resource Center.

This Center, opened in 2010, brings programs for children from birth through the early elementary grades under one roof. It also helps families navigate the many public and private programs that can support growth and learning for the 200 children enrolled at the Center. The goal is a seamless system of early childhood education, services and health and family supports that will boost language, literacy and developmental skills so that these young children enter school fully ready to learn.

A key aspect of this program is the Family Health Navigator—a nurse who works with families to promote each child’s health and development. She helps families identify and connect with needed services—coordinating appointments with doctors or other medical providers, helping families schedule and prepare for appointments, and following up to ensure that families understand and that the child gets the “best bang for the buck” from each service. Recognizing that children’s well-being is unlikely if other family members are not doing well, the Health Navigator also helps parents and siblings find and connect with services they need to improve their health and well-being.

These efforts are paying off. A 2012 program report—Climbing the Ladder of Reading Proficiency—showed a 12-point increase in the percentage of children scoring above the 50th percentile on the Peabody Picture Vocabulary Test, increasing from 11 percent to 23 percent in the one year between 2011 and 2012. Ninety-nine percent of children had a primary care physician. And 63 percent of these children were reading at or above grade-level when they entered kindergarten, compared to only 47 percent of their peers who were not in the program.
READY AT FIVE

Introduction

Children ages 3–5 are lively, eager and curious, gaining confidence in who they are, and communicating through both talking and listening. They are learning to pay attention, sit still, share with others and gauge another person’s perspective. They are also beginning to make decisions for themselves about what to wear, what book to look at or what game to play, and what they don’t want to eat. They are becoming more independent.

Before turning five and a half, most preschoolers will demonstrate progress across developmental domains:

- **Language and communication (receptive and expressive language)**
  He can follow simple instructions, such as “put your hands above your head,” and correctly identify pictures of *mice*, *teeth* and *feet* when asked “What is this?”

- **Fine and gross motor coordination**
  She can write three or more numbers (1, 2, 3, 4, etc.).

- **Pre-academic and academic skills**
  He can correctly recognize eight or more letters of the alphabet when an adult points to a letter and says, “What’s this?” He can recognize the numbers 5, 6 and 7—and be able to count out that number with sticks.

- **Self-help**
  She can play alone—without TV or video games—for 15 minutes or more.

- **Behavior (social and emotional development)**
  He can play games with rules, such as board games, kickball or hopscotch.

Many preschoolers can do much more in all of these areas. And, if a five-and-a-half-year-old lacks any of these skills, the child may have an undiagnosed developmental issue that could benefit from early intervention.33

Preschoolers’ thinking, language, social and motor skills are all changing rapidly during this period. All of these developmental domains contribute to the complex process of learning to read. To be ready for formal schooling at age five, the usual age of entering kindergarten, children need continuing interaction with caring adults, language-rich environments and safe places to play alone and with friends. They also need regular opportunities to test their newly found skills of drawing letters and numbers, communicating verbally with others and following directions.
How is children’s healthy development at age five related to grade-level reading?

- Children whose family members read to them daily are more likely to increase their literacy skills, strengthen their social-emotional development and do better in school. In 2007, 40 percent of three- to five-year-olds from the lowest-income families were read to daily by a family member, compared to 64 percent of children from families with incomes above 200 percent of poverty.

- High-quality early learning programs, including center-based child care, preschool or prekindergarten, can boost children’s language and literacy skills, academic success and social and behavioral development in kindergarten and the early grades. In some studies, children from low-income families in full-day high-quality programs have seen positive educational achievement into adulthood. In 2010, an estimated 25 percent of children ages 3–5 were enrolled in full-day preschool and prekindergarten programs; 27 percent were enrolled in part-day programs. Children from higher-income families ($75,000 or more) are much more likely to participate in full-day programs than are children from low-income families.

- Most states require children to be fully immunized against childhood infectious diseases before enrolling in school. Immunization generally protects children’s health, prevents outbreaks of life-threatening diseases and ensures that children will not lose valuable learning time to preventable absence from early care and learning programs. However, more than a quarter of children in families below the poverty line do not receive the CDC’s recommended combined series of vaccines.

- Most vision and hearing impairments can readily be detected and corrected with screening and follow-up with glasses and auditory aids. These are essential to ensuring that children can see and hear the teacher, see the whiteboard and reading materials in whatever medium they are provided, listen to stories and engage with teachers and peers to further their learning.

- In shifting to a more structured environment in kindergarten, children may have difficulties in forming relationships with peers and adults, leading them to become withdrawn or aggressive. In either case, they lose connection to learning and may fall behind. Many of these challenges can be overcome through “transition” programs that prepare children, parents and teachers for the new expectations of formal schooling and engage and support them through the process.

Where do children spend their time at this age? What health and learning issues may emerge?

- Child care, Head Start and Pre-K are the primary settings where children ages 3–5 from low-income families spend significant time and have opportunities to participate with other children in early learning and social development. High-quality environments provide: an orientation to language and literacy; play as a way to develop social interaction with peers through listening, communicating and understanding different points of view; linkages to a routine source of physical and oral health care; and identification of physical or social-emotional challenges that children face to be ready for formal schooling.

- Three- to five-year-olds should frequent health clinics and pediatricians’ offices for checkups and immunizations. These well-child visits create an opportunity for vision, hearing and developmental assessments, as well as for health care providers to hear family members’ concerns, provide guidance about their children’s development, and promote healthy behaviors related to nutrition, physical activity and oral health care. These visits also provide an opportunity for pediatricians to emphasize to parents the importance of reading daily to their children, and to make books available to children at every visit.

- Home visiting programs, especially those that reach families with children ages 3–5, support parents and families in their primary role as children’s first teachers. They model ways for parents to create language-rich
environments, read to and with their children and stimulate healthy habits.

- Neighborhood playgrounds and parks can offer safe places for children to run and move—individually and in groups—to use their energy, strengthen their bodies and learn both the value and enjoyment of physical activity.

- Children often accompany their parents to the grocery and other stores; this provides fun and teachable moments about healthy eating, safety and learning to navigate the world around them.

What information can help Sponsoring Coalitions understand children’s healthy development to be ready at five for formal schooling in their communities?

- How many children participate in high-quality full- and part-day early learning programs, such as child care, Head Start and Pre-K?

- How many children miss more than 10 days a year, or are suspended or expelled from, or retained in, Pre-K and Head Start programs?

- How many children and families participate in a program designed to help them make the transition from Head Start, Pre-K or child care to kindergarten?

- How many children are not up-to-date with their immunizations before entering kindergarten?

- How many children in child care and Pre-K programs are regularly screened for developmental delays, vision and hearing impairments and lead poisoning?

- How many children who are screened and identified as having delays, vision or hearing problems or elevated levels of lead in their blood receive necessary follow-up and interventions?
Alameda County, California includes many ethnically diverse, low-income communities with high rates of poverty, low parent education levels and large numbers of children who are English Language Learners. Many children enter child care when they are very young and spend much of their time during the early years in child care centers. In these communities, young children frequently experience developmental disparities resulting from economic hardship and social disadvantage. Some children have mental health issues resulting from abuse and neglect, exposure to domestic violence, multiple foster care placements and other issues. Many also have behavior issues that disrupt the learning environment.

Children's self-regulation skills—their ability to get along with others, think of consequences, identify and express feelings appropriately, and resolve problems and follow rules—are central to their healthy development and kindergarten readiness. Children's self-regulation is a better predictor of their school readiness than IQ or entry-level reading or math.41

Many centers and homes that care for children from low-income families in Alameda County’s communities are not equipped to meet their multiple needs and challenges. Early childhood teachers are underpaid and often feel undervalued. Many have little training and a lack of support from outside the classroom leaves them with little capacity to respond to the multiple challenges that children bring to school every day. A 2009 study by the Child Care Law Center found that preschool children in California are expelled at a rate approximately three times the rate of children in the K–12 system.42

In Alameda County, a Mental Health Consultation Grant from the County’s First Five Commission brought mental health professionals into child care centers across the county to provide coaching in strategies to address children's social and emotional development. The grant also provided direct consultation for as many as 2,000 children per year. An evaluation of a similar program in the county showed significant improvements in teachers’ ratings of children's social competence, as well as improvements in teachers’ ratings of children's aggression and withdrawn social behavior.43

More recent studies in other communities within Alameda County reinforce the importance of access to mental health services for young children. Preschoolers in programs with access to mental health consultation exhibit fewer problem behaviors and have lower rates of expulsion.44

Demand for Mental Health Consultation resources for child care programs consistently exceeds supply in Alameda County and across the country. Head Start programs, which provide mental health consultation services for staff and children, can serve as a model for implementation in other child care and preschool settings.
PRESENT AND ENGAGED IN THE EARLY GRADES

Introduction

Between the ages of five and nine, children grow and develop rapidly and adapt to formal classroom situations and specific expectations for learning. They work alone and in groups; respond to direction and instruction from teachers and other adults; memorize facts and apply them to new situations; and develop the gross and fine motor skills necessary for activities as disparate as writing a paragraph and riding a bicycle.

Meeting the challenge of becoming a proficient reader in the early grades requires that children have physical health and vitality to attend school regularly and to be fully engaged in learning activities; emotional well-being and the ability to build and maintain positive relationships with adults and peers; and cognitive and verbal development to acquire new and more complex skills.

How is children's healthy development in the early grades related to grade-level reading?

- Children learn to associate symbols with sounds and sounds with meaning. Developing language and literacy skills that lead to reading requires integrating input from the senses and processing them to convey concepts. Reading comprehension (associating groups of letters with concepts and using those concepts to develop more complex ideas) depends on both cognitive and verbal development.

- Among children rated by their parents as being in poor health, chronic absence significantly increased for children from families with incomes at 200–300 percent of the federal poverty level—a level that makes family members ineligible for publicly funded health insurance, but often is not sufficient for them to purchase private insurance.45

- Among children from low-income families, chronic absence in kindergarten predicts the lowest levels of educational achievement at the end of fifth grade.46

- Children who participate in sports report higher levels of school achievement. Participation in organized sports by children from low-income families may provide an opportunity that other youth take for granted; as a result, the effects on academics and grades are more pronounced for these children.47

- Kindergarten children who live in households that lack consistent access to enough nutritious food scored lower on standardized tests at the beginning of the school year and learned less over the course of the school year than children from more food-secure homes.48

- Sixty-two percent of high socioeconomic status (SES) kindergartners are read to every day by their parents, compared to 36 percent of kindergartners in the lowest SES group.49 Daily reading with parents, which is often prescribed by pediatricians through Reach Out and Read and other efforts, is associated with the development of language and other emergent literacy skills.50

Where do children spend their time at this age? What health and learning issues may emerge?

In school

- Children spend increasing amounts of time in classroom settings where they are expected to sit still and follow verbal instructions. Children who are restless and distractible in groups may be labeled as “hyperactive” or “ADHD” (attention deficit/hyperactivity disorder). It may be challenging for them to remain quiet and seated in formal settings with large numbers of children and their learning may be hampered by difficulties in focusing on verbal directions.

- Children with chronic health conditions, such as asthma and diabetes, may have challenges connecting with structured school environments. A meta-analysis of literature on health and learning describes connectedness and engagement with school as a “causal pathway” through which health disparities impede motivation and ability to learn: a child who is not feeling well, or lacks the energy for full participation...
in the learning environment, is not likely to be fully engaged in classroom activities.\textsuperscript{51}

- Children are in more structured classrooms, with teacher-directed sequential learning activities. Children who miss many days of school in the early grades for health reasons can fall behind in a structured curriculum and have difficulties catching up.

\textit{In out of school time}

- Children spend time outside of the classroom in after school and/or summer learning programs, and in physical activities and sports. High-quality out-of-school time programs offer opportunities for physical activity, which is connected to increased capacity for learning. Too often, children from low-income families miss out on these opportunities: Roth and Brooks-Gunn found that “barriers to participation in afterschool programs are particularly salient for economically disadvantaged youth.”\textsuperscript{52}

- Children spend lots of time in groups. Successful group interactions require social and emotional health, including self-confidence and self-control, so that each child can make friends and interact with other children without getting into conflict or feeling lonely and excluded. Structured group activities that involve following increasingly complex directions and playing games with complicated rules require concentration and social skills, as well as physical stamina and cognitive processing.

- Children also spend significant amounts of their out of school time at home or in the care of a family member, friend or relative. Families play important roles in children’s health and learning. They continue to read to/with children; ensure that they have sufficient sleep; monitor and limit time with television and electronic devices; establish and monitor healthy routines such as oral care and nutrition; and provide opportunities for children to be physically active. (See Section III on the Role of Families on page 8.)

\textbf{What information can help Sponsoring Coalitions understand children’s healthy development in the early grades in their communities?}

\textit{Information about children:}

- What percentage of children are chronically absent (missing more than 10 percent of school days) in grades K–3?

- What percentage of children are suspended or expelled from school in grades K–3?

- What percentage of children are enrolled in Special Education (have an Individual Education Plan or IEP) in grades K–3? How does this compare with state rates and other localities?

\textit{Information about strategies to support children’s health:}

- What health, health education, nutrition education services and opportunities for physical activity are provided at school or in other places where children in the early grades spend their time?

- What afterschool programs are available for children in the early grades? What is the focus of these programs (remedial, enrichment, physical activity, etc.)? What is the quality of these programs? What percentage of children from low-income families are enrolled in these programs?

- What summer learning opportunities are available for children in the early grades? What is the focus of these programs (remedial, enrichment, physical activity, etc.)? What is the quality of these programs? What percentage of children from low-income families are enrolled in these programs?

- What opportunities are available in schools and in the community for parents and families to learn about their children’s healthy development? What percentage of low-income families participate in these opportunities?
COMMUNITY SOLUTION:
Health-Related Strategies Reduce Chronic Absence
Franklin Elementary School
Oakland, California

An engaging, nurturing environment awaits the nearly 800 Franklin Elementary School students when they arrive at school. While the average chronic absence rate in elementary schools in Oakland is 11 percent, Franklin’s rate is 5.1 percent, or less than half the district’s average. Franklin students also score 100 points above the district average on the state’s Academic Performance Index. Students of Asian and Latino descent make up 70 percent of the student population, and 67 percent of the students are English Language Learners. More than eight in 10 students have been identified as eligible for free-or reduced-price meals.

Strong Culture of Attendance

Despite the numerous barriers these families face, most place a high value on education and attendance—viewing education as a main source of hope for their children’s future. Family enthusiasm is matched and reinforced by the staff and teachers. If the attendance data reflect a student’s continued absence, a staff member who speaks the family’s home language reaches out to the family. The approach, Principal Jeanette MacDonald says, “uses the carrot, not the stick.” School staff explore the barriers each family faces and asks, “How can we help?”

Welcoming Environment and Sense of Belonging

Establishing a sense of belonging and engagement for the entire school community—students, families, staff, teachers and community partners—is crucial to maintaining this culture of attendance. Given the diverse population, it is essential for Franklin’s staff to recognize and respect the cultural and linguistic differences that their families bring. The school achieves this by intentionally hiring staff members with linguistic capabilities that reflect the community.

Community Partners Promote Attendance through Health Strategies

Principal MacDonald and the Franklin staff extend this welcoming environment to engage community partners in promoting and supporting attendance. Franklin is a “place for partnerships” that nurtures long-lasting, collaborative community and interagency working arrangements. MacDonald fights to maintain funding for these community partnerships and student and family support services, which include an in-house referral system with a full-time nurse, several mental health professionals, case management and afterschool programs. She also consults frequently with these community providers and facilitates space and computer access for them.

A counseling team works with students who are dealing with the effects of poverty and immigration. Therapists from the Ann Martin Center supplement the work of school staff. Franklin also has partnerships with such agencies as the Lung Association, Alameda County Dental Services, Alameda County Champions for Change nutrition program, East Bay Asian Mental Health, Oakland East Bay Symphony, Random Acts and Oakland Firefighters.
This section includes a description of five key strategies that promote children’s health and learning across the ages and stages of development: Ensuring Health Coverage and Family-Centered Medical Homes; Expanding Oral Health Services; Providing Screenings for On-Track Development (including developmental screenings, vision and hearing screenings, and screening for lead poisoning); Improving Nutrition and Physical Activity; and Creating Safe and Healthy Home Environments. Each section includes a discussion of the relationship of this element to grade-level reading and suggests data that Sponsoring Coalitions can collect to understand the problem in their communities.

ENSURING HEALTH COVERAGE AND FAMILY-CENTERED MEDICAL HOMES

Introduction

Health insurance coverage provides financial resources to pay for primary and preventive care. Publicly supported health insurance covers an increasing proportion of children from low-income families, and many states have provisions that connect these insured children to a medical home. Yet gaps in insurance coverage persist, posing additional risks to young children’s development and learning for those who are uninsured or unenrolled.

Young children need access to consistent preventive and primary health care to promote healthy growth and development essential for learning. A medical or health home provides continuity of care and a focus on prevention as a way to address these needs. Children enrolled in medical homes receive regular well-child care; screening for developmental progress, vision, hearing and lead poisoning; and immunizations against preventable infectious childhood diseases. Access to these preventive services is critical in helping children from low-income families overcome disparities and maintain healthy, on-track development.
A family-centered medical home is part of a coordinated network of community-based services. It helps parents maintain their own well-being and positive behaviors as well as promoting children’s health. The federal Maternal and Child Health Bureau defines family-centered care as a “respectful family/professional partnership that honors the strengths, cultures, traditions and expertise that everyone brings to the relationship.” Family-centered care allows families to develop trusting, confidential relationships with a health care provider that result in high-quality services. The American Academy of Pediatrics (AAP) has developed Bright Futures, a model for pediatricians in providing family-centered care.

How do health coverage and medical homes affect children from low-income families in the community?

- Parents are responsible for ensuring that their children receive necessary immunizations according to the CDC’s recommended schedule in order to keep them healthy and to prevent the spread of disease to large groups of other children. A relationship with a medical home helps families stay up to date with the immunization schedule and ensures that a child’s medical records are properly maintained.

- Without insurance coverage and a medical home, parents frequently wait until emergency care is necessary. At that point, children are usually a lot sicker; must be absent from child care, Pre-K, kindergarten or school much longer; and miss key learning opportunities. When Colorado established a statewide medical homes program, studies showed that children enrolled in a medical home were much more likely to have a well-child visit and less likely to visit the emergency room for non-life-threatening conditions.

- When children’s growth and learning may not be on track, a medical home provides a key vehicle for identifying delays through developmental screening, reviewing screenings conducted in settings such as child care and Head Start programs, and connecting children as early as possible to interventions and supports that can prevent or reduce impediments to learning.

- Pediatricians and other primary care providers that incorporate Reach Out and Read into medical homes distribute books to children as a way to reinforce the importance of reading, expand children’s own libraries, and spur parents to read daily to and with their children. Parents served by the program are four times more likely to read aloud to their children. Children served by the program display significant gains in language, score higher on vocabulary tests and school readiness assessments, and show a six-month developmental advantage over non-participating children in the preschool years.

- Oral health diseases affect young children from low-income families at a higher rate than those from higher-income families. Persistent dental problems cause children pain and result in many missed days of school. A comprehensive medical home provides an opportunity for regular oral health scans for young children and referrals to appropriate dental care. (See section on Expanding Oral Health Services, page 29.)

- Partnerships between families and health providers create a time and place for connection, emotional support and conversation about children’s development and learning and parents’ concerns. This relationship can also surface parents’ own challenges, needs and fears, and provide support and counsel for successful parenting.

How are health coverage and enrollment in a medical home related to grade-level reading?

When children have regular preventive care and early intervention services that health insurance covers, they are more likely to develop on track for third-grade reading success. In 2010, 9 percent of children in low-income families did not have health insurance. In 2008, just 59 percent of children under age six who lacked health insurance coverage had received a well-child checkup in the past year, compared to 88 percent of insured children under six. Missing a well-child checkup can mean falling behind in immunizations,
allowing a developmental delay to go unaddressed, and/or missing an opportunity for testing for lead poisoning, all of which can contribute to lower reading achievement.

• Fewer than 40 percent of children from poor families (under 100 percent of the federal poverty level) and fewer than 50 percent of children from low-income families (under 200 percent of the federal poverty level) received health care in 2007 that met the criteria for medical homes. Approximately 33 percent of poor Hispanic children and 43 percent of poor black children had a medical home.61

• Head Start provides a strong example of linkages between early learning programs and medical homes. In 2010, 96 percent of Head Start children had a regular source of health care by the end of the program year. Of children who entered Head Start without health insurance, more than half acquired it by the end of the program year.62

What information can help Sponsoring Coalitions understand how health coverage and medical homes affect children from low-income families in the community?

• What percentage of children in the community have health insurance?

• What percentage of children in the community are eligible for Medicaid or the Children’s Health Insurance Program but are not enrolled?

• What percentage of children and families participate in a comprehensive family-centered medical home?

• What percentage of children have regular well-child visits to a health care provider?

• What percentage of children are up-to-date on the CDC recommended combined schedule of immunizations?
**COMMUNITY SOLUTION:**

**Medical Homes Promote Reading Readiness**

**South Main Public Health Clinic**

**Salt Lake City, Utah**

South Main Public Health Clinic serves as a comprehensive medical home for a significant proportion of Salt Lake City’s low-income Latino families and their children. In partnership with the University of Utah Department of Pediatrics and School of Nursing, the clinic provides primary care, a special clinic for teens and their babies, and care coordination for children with special health care needs. Working with Holy Cross Ministries, the clinic uses lay health workers to reach out to families. Through a grant from the federal Maternal and Child Health Bureau and the American Academy of Pediatrics, South Main also runs parent support groups for Latino parents of children with special health care needs.

More than 90 percent of South Main’s patients are low income: 75 percent are enrolled in Medicaid, 10 percent are uninsured, 10 percent participate in the Children’s Health Insurance Program and 5 percent have private health insurance. Most (80 percent) of the parents are Spanish-speaking and their children are English Language Learners. Families have access to interpretation services to facilitate communication with the health providers, and a significant proportion of South Main’s physicians also speak Spanish.

The young children who come to South Main also get a special boost in language and literacy development: the clinic has fully incorporated Reach Out and Read into its primary care practice. Starting at a baby’s six-month visit and continuing until age five, the doctor gives the child a book at every visit, using it to calm her down and see whether the child is able to hold the book, engage with it and point to the pictures. The physician will look for these signals to assess a child’s developmental progress and identify issues that may be holding her back. Using the book also enables the doctor to check on parent-child attachment: does the child look to the parent to gauge whether and how to accept the book? The interaction also creates an opportunity for guidance to parents about reading to and with their child and about bedtime routines.

Dr. Wendy Hobson-Rohrer, Medical Director of the South Main Clinic and Medical Director for Reach Out and Read Utah and her colleague, Marissa Diener, studied the clinic population in order to assess whether the book distribution and literacy program were making a difference. They found that:

- Despite economic hardship, limited education and limited English fluency, 59 percent of mothers in the study reported that their child had been read to the day before, identical to rates reported for high-income families in national surveys and far above that reported nationally for low-income families (36 percent).

- At the end of kindergarten, teachers of children in the Reach Out and Read program identified 60 percent of them as intermediate or proficient in reading. They also rated the literacy skills of 77 percent of the children exposed to the program as having average or above literacy skills when compared with all students of the same grade.

- In the summer prior to kindergarten, 76 percent of these high-risk children were able to tell an interviewer the name of a favorite book.63

Dr. Hobson-Rohrer also reported that parents of children in the Reach Out and Read program sent her thank-you notes for the help their children had received.
EXPANDING ORAL HEALTH SERVICES

Introduction

For too long, oral health has taken a back seat to other aspects of physical health. Yet oral health is fundamental to a child’s capacity to communicate and learn. Healthy teeth and gums support a smile that signals confidence and curiosity. A tortured smile or no smile at all often betrays the pain that may result from one of the most common—and preventable—childhood diseases: tooth decay.

How do issues in oral health affect children from low-income families in the community?

Children's oral health reflects significant disparities in both the occurrence of disease and the care children receive. Children of color, including African American, Latino and Native American children, and children from low-income families are at much greater risk of early childhood caries (ECC), or tooth decay.

• For children ages 2–5, 75 percent of caries are found in 8 percent of the population.
• Compared to those who get to see a dentist, children ages 2–5 who go without a visit have a higher risk of experiencing dental caries.64
• Mexican-American children ages 2–5 are more likely than their non-Hispanic black and non-Hispanic white peers to experience caries in primary teeth.65
• Preschoolers from poor and low-income families are only half as likely as those from higher-income families to visit a dentist. They are five times more likely to have cavities; have three times more cavities; and twice as likely to seek care for pain.66
• In 2010, 89 percent of children enrolled in Head Start had a regular source of dental care by the end of the program year.67

How are oral health issues related to grade-level reading?

• Early childhood caries is an infectious disease that can be transmitted from parent to child. Comprehensive prenatal and obstetric care should include oral health screening and treatment if necessary to ensure that pregnant women and breastfeeding mothers have healthy babies.
• Dental problems, including missing teeth resulting from decay, abscess or injury, contribute to difficulties eating, problems with chewing and limited food choices. These may affect whether children are getting adequate nutrition, a key building block for school readiness and active learning.
• Without appropriate treatment, dental disease can interfere with children’s most basic activities: eating, sleeping, speaking and learning. The pain young children experience from tooth decay or other dental issues may affect their concentration and emotional and behavioral health while they are in school or early learning programs.
• Children from low-income families are most vulnerable and are at much higher risk of missing school. These children were 12 times more likely to have missed school as a result of dental problems than their peers from higher-income families.68

What information can help Sponsoring Coalitions understand how issues of oral health affect children from low-income families in the community?

• How many children in the community have a dental health home?
• How many children in the community visited a dentist in the past year?
• How many children in the community miss a significant number of days at preschool or school due to untreated dental problems?
How many children receive oral health screenings at their child care, Head Start, other preschool program or school?

How many children receive oral health screenings from their primary care provider?

How many dentists in the community accept Medicaid or CHIP?

Does the community permit alternative dental therapists to provide oral health screening and procedures such as fluoride varnish and dental sealants?

How many low-income pregnant women and breastfeeding mothers have access to oral health providers?

---

**COMMUNITY SOLUTION:**
**Making Milwaukee Smile**
*Milwaukee, Wisconsin*

The 2008 Make Your Smile Count survey of third graders in Wisconsin revealed that Milwaukee children experience a disproportionately high level of oral health disease. More than a third (37.5 percent) of third graders had untreated tooth decay, a much higher rate than in the rest of the state.69

To address this concern, a new Healthy Teeth=Healthy Kids partnership of several key institutions in Milwaukee used a special three year funding award to create Making Milwaukee Smile. The partners—the Medical College of Wisconsin, the Children's Health Alliance of Wisconsin, the Milwaukee Public Schools and Columbia St. Mary’s Hospital and community physicians—focused this initiative on two schools to address three key objectives:

- Reducing the proportion of children with urgent oral health needs;
- Increasing the number of children in the Columbia St. Mary’s school-based oral health program; and
- Increasing the role of health care providers in assessing children’s oral health needs.

The two participating schools—the Francis Starms Early Childhood Center and the Starms Discovery Learning Center—served children ages 3–14, 81 percent of whom were enrolled in Medicaid and 7 percent of whom were uninsured. A coordinator at each of these schools helped parents enroll their children in the school’s oral health program to increase children’s access to dental providers and tracked the changes in children’s oral health status.

Over three years of the initiative, Starms’ students’ participation in the oral health program increased from 50 to 77 percent, significantly improving their access to preventive services and decreasing the proportion of children with dental disease. The percentage of children with urgent dental care needs dropped by more than half.

Making Milwaukee Smile expanded the program to an additional 10 schools. With the aid of an oral health coordinator in each school, student enrollment in the oral health program has increased 116 percent, from 19 to 41 percent, reaching close to 2,000 children in the 12 schools.
PROVIDING SCREENING FOR ON-TRACK LEARNING: 
DEVELOPMENTAL SCREENING AND SCREENING FOR 
HEARING, VISION AND LEAD POISONING

Introduction

Screening identifies children who need follow up and are likely to benefit from intervention, services and supports. This section focuses on four types of screening—developmental, vision, hearing and lead toxicity—because concerns in any of these areas can affect learning and the ability of a child to read proficiently by the end of third grade.

The term “child development” describes the many domains in which a child grows and learns:

- Cognition and intellectual development
- Language and communication (understanding as well as speaking)
- Fine and gross motor coordination
- Pre-academic and academic skills (including reading and mathematics)
- Self-help (being able to handle hygiene and dressing, for example)
- Behavior (including both conduct and mental health or social and emotional development)

When children are developing on track in all of these domains—and have good vision and hearing, are free from lead and other toxins, and are in good physical health—they are primed to learn and to read proficiently by the end of third grade.

Focusing on how children develop—that is, how they grow and acquire new skills over time—is a relatively new concept that goes beyond traditional pediatric practices and some health professionals have been slow to adopt this approach. When pediatricians add regular developmental screenings to traditional practices, families and children benefit from an additional support for improving grade-level reading outcomes.

In the words of James Heckman, winner of the Nobel Prize in Economics:

*The returns to human capital investments are greatest for the young for two reasons: a) younger persons have a longer horizon over which to recoup the fruits of their investments, and b) skill begets skills. Skill remediation programs for adults with severe educational disadvantages are much less efficient compared to early intervention programs.*

Early intervention is especially important for children from low-income families, who are more likely than their more affluent peers to have undiagnosed conditions—whether disabilities, developmental delays, impaired hearing or sight, or lead poisoning. Later diagnosis means lost opportunities for intervention and support.

A sharper look at child development is now possible because there are good, simple, low-cost screening tools to identify children who are likely have a delay in one or more developmental domains. Effective early interventions, therapies and supports are also available to help children with developmental issues get back on track.

Screenings for vision, hearing and lead poisoning are better understood and practiced than developmental screening and illustrate that good screening practices can be widely and effectively implemented.
How do issues concerning screenings and interventions affect children in low-income families in the community?

The most common issue in communities is that too few children from low-income families receive recommended screenings and follow up when indicated.

- Children from low-income families are almost twice as likely as children from higher-income families to have a reported developmental disability (such as ADHD, learning or intellectual disabilities, stuttering and stammering). However, they are typically identified—and helped—later than their higher-income peers.

- Although the American Academy of Pediatrics recommends annual developmental screenings with a high-quality tool for children up to age three, with continued regular screenings through age five, most children never receive even one developmental screening with a good tool. Less than half of pediatricians report that they always or almost always use a standardized developmental screening tool.

- Even though Medicaid requires screenings for lead toxicity because children from low-income families are the most likely to live in aging housing stock contaminated with lead-based paint, these screening rates are “unacceptably low.”

- More than 15 percent of all children ages 3–16 have some sort of developmental disability, but less than 3 percent of infants and toddlers nationwide receive support through Early Intervention programs.

- Nationwide, 8.5 percent of all students ages 6–21 are enrolled in federally driven Special Education programs funded by IDEA (the Individuals with Disabilities Education Act). Many of these students struggle to read and learn, even with added services through an Individualized Education Plan. This percentage could be reduced—and student achievement increased—if more infants, toddlers and preschoolers received needed early-intervention services and supports.

How are screenings and effective early interventions related to grade-level reading?

Infants, toddlers, preschoolers and children in the earliest grades with unaddressed developmental, vision, hearing, or lead-poisoning concerns are among the least likely to read proficiently by the end of third grade. An important part of ensuring that every child enters school ready to learn and becomes a good reader is identifying problems...
and then addressing them early when interventions can be most effective.

• The majority of children who have, or are at risk for, an emotional or behavioral disorder are not identified—and consequently do not receive early intervention—before entering school.84

• One of the fastest growing concerns is autism, which can profoundly affect multiple domains important for grade-level reading and school success. One in 88 children (and one in 54 boys) born in 2000 has an Autism Spectrum Disorder, almost double the one-in-150 rate found for children born just eight years earlier, in 1992.85 The American Academy of Pediatrics recommends universal autism screening for all children at 18 months of age.86

• Since so much learning depends on sight, uncorrected vision problems can sabotage academic success. An estimated 20 percent of school-age children have a vision problem—most often nearsightedness, which makes it difficult to see the blackboard, or farsightedness, which makes it difficult to read a page. Importantly, vision problems of children from low-income families are much less likely to be diagnosed and fully addressed than those of children from higher-income families.87

• Although much less common than vision problems, uncorrected hearing problems in young children are linked with lifelong speech and language deficits, poor academic performance, social and emotional challenges, and emotional difficulties. For a child born with hearing loss, effective intervention within the first six months of life significantly improves future prospects.

• Lead is toxic to the brain and can cause serious, and often irreversible, cognitive impairment in children, with the greatest risks to the youngest children.89 High levels of lead in a child’s blood often result in later academic failure and behavior problems.90 (See the section on Safe and Healthy Homes, page 38, for more information.)

What information can help Sponsoring Coalitions understand how screenings and effective interventions affect children from low-income families in their community?

Collecting information about screening and follow-up for developmental concerns and disabilities, health and vision problems, and elevated blood lead levels in children will require working with multiple partners in the community. The Health Department, schools, Early Intervention programs, Head Start and Early Head Start programs, and nonprofit organizations such as the March of Dimes may each collect some of the data. Even then, local information about some conditions or disabilities may not be readily available. Coalitions may want to review state or national information and compare the community situation with larger trends.

• What do you know about the prevalence among young children of conditions that impede learning and reading—such as developmental delays, disabilities, vision and hearing problems, and lead poisoning?

• What percentage of children are enrolled in Early Intervention (children from birth to age three) and Preschool Special Education (children age 3–6)? How do these percentages compare to state and national rates? Higher enrollment rates for young children are often a good sign: they mean that the community is identifying and helping infants, toddlers and preschoolers who need intervention sooner rather than later.

• Are there neighborhoods with many houses or apartments built before 1978, which may be contaminated by flaking lead paint? Are there local efforts to reduce or remove contamination or help families move to uncontaminated housing? Are these efforts sufficient to serve the number of families who need them?
COMMUNITY SOLUTION:
Combining State and Federal Funds to Prepare Communities to Use Developmental Screening Tools
Georgia

By piecing together state and federal funding sources, Georgia prepared local communities to conduct evidence-based developmental screenings of young children. The work included a statewide training effort in 2009–2010 to help communities use the Ages and Stages Questionnaires (ASQ), one of several excellent parental-report developmental screening tools.

Cornerstone support for this initiative came from an Early Childhood Comprehensive Systems (ECCS) grant from the U.S. Department of Health and Human Services. These ECCS grants, which 49 states have received, focus not only on screening and social-emotional development, but also on providing access to health care, medical homes and quality child care; educating parents; and supporting families. To complement federal funding, Georgia state funds covered the costs of key staff, including that of the ECCS coordinator. In addition, one-time supplemental Early Intervention funds from the 2009 American Recovery and Reinvestment Act (ARRA) enabled the state to purchase materials and booklets to support a statewide training effort.

In all, the state trained 80 “trainers of trainers.” They, in turn, trained an estimated 700 people in communities to help parents complete the ASQ, to score the results to see if a child had a developmental concern and, for those children with potentially serious developmental issues, to help the family navigate its way to effective services and interventions.

This training was especially important in Georgia because of low enrollment rates and stringent eligibility rules for Babies Can’t Wait, the state’s Early Intervention program. In 2007, Georgia had the lowest Early Intervention enrollment rate of any state—1.2 percent of infants and toddlers, compared to a national average of 2.53 percent.91

[Every state has an Early Intervention program for infants and toddlers, from birth to 36 months old, who have developmental delays or disabilities and are therefore eligible for free services and supports. States have flexibility to set their own eligibility criteria—from broad/inclusive to narrow/restrictive—under this program, which is also known as Part C of the federal Individuals with Disabilities Education Act (IDEA).]

In addition to increasing the number of infants and toddlers who receive comprehensive screenings, the training and state-level partnership efforts have helped to connect the disparate systems that serve young children and their families—from health entities to schools and child welfare services. For example, when Georgia received federal funding from the Affordable Care Act to expand home visiting programs in seven counties, these new programs were able to build on the partnerships and progress made through earlier ECCS statewide efforts and the ASQ training initiative.

• What programs in the community focus on screening—developmental, vision, hearing and lead toxicity? Are these programs readily accessible to low-income families with young children?

• What percentage of young children from low-income families actually receive high-quality screenings? And how many children from low-income families with “red flag” screenings actually receive needed follow-up services or intervention?
IMPROVING NUTRITION AND PHYSICAL ACTIVITY

Introduction

Children's health and learning are influenced by their nutritional status at all stages of development, beginning at conception. As poverty increases across the United States, more families and children are becoming eligible for federally subsidized food programs that are designed to address this basic need. The intertwined issues of increasing access to sufficient food and ensuring food quality challenge families and food program providers.

Recent research is highlighting the importance of physical activity in relation to learning. Children from low-income families often have limited access to physical activity, as schools reduce recess and physical education classes, and opportunities for activity in out-of-school time are limited in many low-income communities.

How do issues of nutrition and physical activity affect children from low-income families in the community?

Many families struggle to provide healthy food choices. For families living in low-income neighborhoods, healthy foods may not be readily available, since grocery stores that offer fresh and healthy foods at reasonable prices are often not located close to their homes. Federal food and nutrition programs are designed to provide nutritional supports for low-income families and their children, beginning before birth:

- The Women, Infants and Children (WIC) program supports low-income pregnant and post-partum women, infants and children up to age five with nutritious foods, information on healthy eating and referrals to health care.
- Child and Adult Care food programs provide nutritious meals and snacks in child care programs serving children from low-income families to improve the overall quality of child care and make care more affordable for low-income families.
- Head Start includes nutritious meals and snacks for participating children from low-income families.
- School lunch and breakfast programs serve children in families with incomes up to 185 percent of the federal poverty level with free or reduced-price meals. New federal guidelines significantly strengthen the healthy food choices that will be offered through the program.
- The Summer Food Service programs ensure that children in low-income areas can continue to receive nutritious meals during long school vacations, when they do not have access to school lunch or breakfast.
- The Supplemental Nutrition Assistance Program (SNAP), often called Food Stamps, provides monthly benefits to eligible low-income families for the purchase of food.

Many children from low-income families struggle with obesity, possibly because of limited food choices; unfamiliarity with fresh, unprocessed foods; insecure food supplies that can lead to overeating; and low levels of physical activity. There is a correlation, but limited evidence to date, that children's obesity affects school performance. A recent report from the Institute of Medicine recommends making schools a national focal point in preventing obesity, and working to ensure that all children in grades K–12 have an hour of physical activity every day.

There is evidence that increased physical activity during the school day has a positive effect on short-term memory, even when it replaces time spent on academic tasks. Estimates of population-wide levels of physical activity indicate that black and Hispanic youth are less physically active than white youth, with disparities particularly evident for females. Movement and physical activity are also important for preschool children, to appropriately develop strength, coordination and stamina, all of which affect learning and provide an early hedge against childhood obesity.
How are nutrition and physical activity related to grade-level reading?

Poor nutrition and lack of physical activity are associated with lower academic achievement. When children’s basic nutritional and physical activity needs are met, they attain higher levels of achievement. Studies have shown that, for example:

- Children who suffer from poor nutrition during the brain’s most formative years score much lower on tests of vocabulary, reading comprehension, arithmetic and general knowledge than those who are adequately nourished.100

- Iron deficiency anemia leads to a shortened attention span, irritability, fatigue and difficulty with concentration. Anemic children tend to do poorly on vocabulary, reading and other tests.101

- Breakfast is the most important meal of the day, and differs qualitatively from other meals by being eaten after a short fast.102 Missing breakfast has a negative effect on cognitive performance, even among healthy, well-nourished children. A test of the speed and accuracy of response on problem-solving tasks given to children who did or did not eat breakfast found that skipping breakfast had an adverse influence on their performance on the tests.103

- Studies have also found that children participating in the federal School Breakfast Program show increases in daily attendance, class participation, and academic test scores, and decreases in tardiness.104

What information can help Sponsoring Coalitions understand how issues of nutrition and physical activity affect children from low-income families in the community?

- Child care providers, school district food services staff, and municipal parks and recreation staff can be good sources of information for determining whether the community is making full use of federal food assistance programs: for example, are lunches available to all children in low-income communities during the summer? Are they served to students in summer learning programs? How many children receive meals in the summer in comparison to those who receive free meals during the school year? Do schools serve breakfast in the classroom to increase children’s learning abilities during critical morning hours?

- Where do low-income families in the community shop for food? Are fresh fruits and vegetables, as well as low-fat dairy products, available to them?

- Are there farmers markets or other sources of fresh foods in the community? Do they accept WIC and SNAP (Food Stamp) benefits?

- Do child care providers and other early learning programs ensure that every day includes sufficient opportunities for young children to be physically active? Do schools in the community provide opportunities for sufficient physical activity every day?

- Is physical activity available to all children in the early grades during out-of-school time programs? How many children from low-income families participate in these activities?
COMMUNITY SOLUTION:
Providing Breakfast in the Classroom
Queen Palmer Elementary School
Colorado Springs, Colorado

At Queen Palmer Elementary, staff work to provide a supportive climate so that all the school’s 260-plus students can learn at high levels. The school has a team of interventionists, mentor teachers and a master teacher who work to provide outstanding instruction for students, many of whom enter kindergarten without prior learning experience. Ninety-four percent of the students in the school, which includes grades K–5, are eligible for free and reduced-price meals—the largest percentage in District 11, which serves Colorado Springs. Queen Palmer is also the only district school to serve breakfast in the classroom to all students.

“When I talked with the teachers, they said, 'If the kids are not fueled properly, the day is not going to be fruitful,'” says Julie Fahey, who is completing her second year as principal at Queen Palmer. “But where can we squeeze in the time?’” The universal Breakfast in the Classroom program, promoted by the statewide advocacy organization Hunger Free Colorado, adds breakfast to start the day.

Teachers plan the day so instructional time is not lost, using the time for oral language review or for writing practice. “We still keep the rigor high,” says Fahey. “We built the menu so it is easy for children to do two things at once, with items such as breakfast sandwiches or burritos.” The school district’s Good Food Project has made significant changes in the food served in all schools, eliminating most sweets from menus, using all-natural meats and more whole grains, and preparing most foods “from scratch” for service at individual schools.

Research shows that school breakfast programs are associated with improved math grades, attendance and punctuality.105 At Queen Palmer, chronic absence is low, and fewer students were tardy in the first year of implementation (2011–2012) than in the previous year. Office staff noticed a drop in the number of students who came to the office complaining that they didn’t feel well. Student achievement at Queen Palmer seems to be trending in the right direction as well: end-of-year assessment data for the school in 2011–2012 showed that 65.8 percent of the students had made a year or more of growth in math, and 65.8 percent were demonstrating proficiency. In reading, 52.8 percent of the students had made a year or more of growth, and 66 percent were demonstrating proficiency.

The school district provided breakfast and lunch during summer break at 35 selected locations around the city, including Queen Palmer and five mobile serving routes with 15 stops. “Our kids don’t really care for breaks,” said Fahey. “They would rather be here.”
CREATING SAFE AND HEALTHY HOME ENVIRONMENTS

Introduction

Every year, unhealthy housing leads to:

- 250,000 cases of childhood lead poisoning;
- 720,000 asthma-related emergency room visits;
- 10,000 cases of carbon monoxide poisoning; and
- 13 million home-related injuries.

(Source: Green and Healthy Homes Initiative: www.greenandhealthyhomes.org)

How do home environments affect children from low-income families in the community?

Many homes in low-income communities are hazardous to children's health.

- Substandard housing may have areas of mold, as well as dust mites or cockroaches and their droppings that can cause asthma.
- Children who are exposed to secondhand smoke at home are also at heightened risk of asthma.
- Housing built before 1978 often has deteriorated lead paint and lead-contaminated house dust.
- The Centers for Disease Control and Prevention estimates that, in 2009, approximately 24 million housing units had deteriorated lead paint and elevated levels of lead-contaminated house dust; more than 4 million of these dwellings were home to one or more young children.106
- Young children are particularly vulnerable to lead poisoning.
- Poor urban, minority youth experience disproportionately high rates of severe asthma and are dramatically harmed by this disease.

Why are safe and healthy home environments important for grade-level reading?

Both asthma and lead poisoning are frequently caused by unhealthy home environments, and both pose significant risks to children's health and learning.

- Children with severe asthma experience considerably more sleep problems, with more daytime tiredness and sleepiness. Sleep disturbance may be related to cognitive function107 and fatigue from disturbed sleep can lead to reduced energy for learning.
- Asthma is the leading medical cause of school absence, leading to 14 million missed school days annually, according to the Asthma and Allergy Foundation of America.108 It is also the third leading cause of hospitalization for children under 15.
- Lead poisoning can affect children's growth and learning ability. According to the Centers for Disease Control and Prevention, “Even low levels of lead in blood have been shown to affect IQ, ability to pay attention, and academic achievement.”109
- Infants and young children are especially likely to be exposed to lead because they put their hands and other objects that may become contaminated with lead dust into their mouths. Young children also absorb lead more easily and sustain more harm from exposure.

The U. S. Centers for Disease Control and Prevention recently accepted the recommendations of a Scientific Advisory Board to focus action on children with blood lead levels above 5 micrograms per deciliter. There are no reliable symptoms of lead poisoning that can help parents detect the problem. Waiting for symptoms is dangerous, as visible symptoms come too late—after long-lasting damage to children. Instead of relying on symptoms, the CDC recommends that parents make sure that children's blood is tested as recommended.110
A family of four had lived in their two-story row home in East Baltimore, built in 1915, for 11 years. The home had no working furnace, and the family had been relying on the oven from the kitchen stove to heat the home for four years. After the oven broke, the family was referred to the Baltimore Green and Healthy Homes Initiative™ (GHHI) to address the lack of heat and the home-based health hazards that were causing asthma episodes for the family's 13- and 17-year-old sons. The children had been absent from school frequently and had been hospitalized, affecting their school performance.

An energy audit of the home revealed that, in addition to lacking a working furnace, the house had an inefficient hot water tank, inadequate insulation, substantial air leakage, lack of venting for the dryer causing moisture to build up in the basement, and water infiltration in the basement. An environmental assessment revealed lead hazards; mouse, rat and roach infestation; mold in the basement; poor dust mite control; poor exterior drainage causing flooding; and a lack of weatherization.

Through an integrated approach led by GHHI Baltimore partners, the Coalition to End Childhood Lead Poisoning and the City of Baltimore Weatherization Assistance Program (WAP) conducted interventions to address hazards and reduce energy consumption costs. The interventions and repairs included replacing the furnace and hot water heater, installing insulation and weather-stripping, repairing and replacing gutters and downspouts, installing compact fluorescent light bulbs, and installing low-flow shower heads and faucet aerators. An intervention to reduce asthma triggers and address lead and safety hazards included replacing the stove, integrated pest management, installing Energy Star windows, stabilizing paint, remediating mold, removing the carpet, replacing the basement exterior door, and installing a dehumidifier, Austin air filtering system, smoke alarm and a carbon monoxide alarm. After the interventions were completed, the family received follow-up services including maintenance visits, asthma management counseling, provision of a HEPA vacuum and allergen reduction cleaning kit, and continued education on reductions in energy consumption.

Since the GHHI intervention, the family reported that the boys have not been hospitalized or missed school due to asthma. The mother also reported that her younger son has gone from being a C student to getting A’s since the intervention.
What information can help Sponsoring Coalitions understand how safe and healthy home environments affect children in their communities?

- Does the community include older housing units (homes and apartments) built before 1978?
- Are there abandoned industrial sites in the community?
- How many young children are routinely screened for the presence of lead? Where are they screened?
- Do children whose screening results show elevated blood lead levels have immediate access to follow-up treatment?

- How many children in the community have asthma? (Check several sources to develop an estimate, including school nurses, hospital emergency rooms and the local chapter of the American Lung Association, if there is one.)
- Are asthma management programs available to help children with asthma continue to attend school and be physically active?
- Is there a program in the community to help low-income homeowners repair their homes and reduce environmental hazards?
- Is the air quality in the community’s schools a hazard to children’s health?
Appendices: Resources for Understanding the Issues in Communities

Appendix A: The Connecticut Framework

- **Appendix A-1: A Framework for Child Health Services: Supporting the Healthy Development and School Readiness of Connecticut’s Children** was published in 2009 by the Child Health and Development Institute (CHDI). The report was written to benefit advocates, providers and policymakers by offering a Framework as a basis for action to improve delivery of child health services for infants, toddlers and preschoolers. [www.chdi.org/frameworkchildhealthsvcs](http://www.chdi.org/frameworkchildhealthsvcs)

- **Appendix A-2: A Framework for Child Health Services—Tool Kit** highlights the importance of child health in overall school readiness and provides a guide for implementing the major recommendations outlined in the Framework. Tools especially relevant to the Getting Started section include the “Health Related Indicators for School Readiness” (page 7) and “Inventory of Critical Child Health Issues, Resources, Strengths, and Needs” (page 15). [www.chdi.org/publications.php](http://www.chdi.org/publications.php)

Appendix B: Resources for Specific Sections of the Starter Kit

- **Pathways Mapping Initiative:** Pathway to Children Ready for School and Succeeding at Third Grade is a web-based toolkit that proposes a series of goals for communities to work toward to ensure that children are ready for school, and are prepared to succeed at third grade. The second goal, “Health and Development on Track,” includes actions with examples, indicators of progress, ingredients of effective implementation, rationale and research evidence.

  Funding for the Pathway to Children Ready for School and Succeeding at Third Grade was provided by the Annie E. Casey Foundation. [www.familyresourcecenters.net/assets/library/109_3rdgradepathway81507.pdf](http://www.familyresourcecenters.net/assets/library/109_3rdgradepathway81507.pdf)

- **Pathways to Early School Success:** Building Local Capacity project (also known as Pathways) is designed to help community-based early childhood coalitions support young children and their families, so that children get off to a strong start in school that will help them succeed in the early grades and beyond. To accomplish this, the National Center for Children in Poverty (NCCP) Pathways Team works with early...
childhood coalitions on community outreach and strategic planning. They focus on strategic planning in the areas of health and mental health, early childhood care and education, and family support. Findings from this project will be used to inform the development and refinement of a set of analytic tools that can be used by community-based early childhood coalitions to update and successfully implement their strategic plans.

*Pathways to Early School Success* is funded by the W.K. Kellogg Foundation. [www.nccp.org/projects/pathways.html](http://www.nccp.org/projects/pathways.html)

- **Project LAUNCH** is a grant program of the federal Substance Abuse and Mental Health Services Administration (SAMHSA) that seeks to promote the wellness of young children birth to age eight. Using a public health approach, Project LAUNCH focuses on improving the systems that serve young children and address their physical, emotional, social, cognitive and behavioral growth. The goal is for all children to reach physical, social, emotional, behavioral and cognitive milestones. Project LAUNCH aims to have all young children reach their developmental potential, enter school ready to learn, and experience success in the early grades. [http://projectlaunch.promoteprevent.org](http://projectlaunch.promoteprevent.org)

  SAMHSA currently funds 16 states, one tribe, the District of Columbia and six communities over five years to test evidence-based practices, improve collaboration among child-serving organizations, and integrate physical and mental health and substance abuse prevention strategies for children and their families. Lessons learned from these communities guide state level systems change and policy development.

**Born Healthy**

- **Baby Basics** began with a book: *Baby Basics: Your Month by Month Guide to a Healthy Pregnancy*, and has since grown into a complete Baby Basics Prenatal Health Literacy Program designed specifically for lower-income populations to help create caring communities that support moms. With easy-to-read materials and educational tools, the Baby Basics Program focuses on everyone involved in a woman’s pregnancy—from the office staff, physicians and nurses, to the in-home clinician and health educator, to the mother herself and her family—changing the way everyone helps pregnant moms access and understand the information vital to delivering a healthy baby, and fostering the loving support necessary to become a great mom.

  *Baby Basics* is available in many languages. A similar volume for mothers on a baby’s first year will be available soon. Baby Basics is a product of the What to Expect Foundation. [www.whattoexpect.org](http://www.whattoexpect.org)

**Thriving at Three**

- **Learn the Signs, Act Early** is a federal Centers for Disease Control website that focuses on child development: [www.cdc.gov/ncbddd/actearly/index.html](http://www.cdc.gov/ncbddd/actearly/index.html). This resource urges communities and providers, as well as parents, to change the way they view children’s health. *Learn the Signs* promotes going beyond simply measuring height and weight to paying attention to how a child plays, learns, speaks and acts. Fact sheets and other useful materials can be downloaded from this website.

- **Bright Futures** is an American Academy of Pediatrics program to promote health and prevent disease by addressing the health needs of children in the context of their family and community. Many resources, including fact sheets, tips for parents and physician practice guides are available at [http://brightfutures.aap.org](http://brightfutures.aap.org).

**Ready at Five**

- **Mind in the Making: The Seven Essential Life Skills Every Child Needs** by Ellen Galinsky, Harper Collins, 2010, describes seven life skills that all children need: focus and self-control; perspective taking; communicating; making connections; critical thinking; taking on challenges; and self-directed, engaged learning. For each of these skills, Galinsky shows parents what studies have proven, and she provides numerous tools that parents
can use to strengthen these skills in their children. A companion website includes products for parents and professional development curricula for those working with children, available at http://mindinthemaking.org.

**Developmental Screenings**

- The Ages and Stages Questionnaires are high-quality, parental-report developmental screening tools. Additional information, including ordering instructions and other useful resources are available at http://agesandstages.com.

- The Parents’ Evaluation of Developmental Status (PEDS) and PEDS: Developmental Milestones (PEDS:DM) are also high-quality, parental-report developmental screening tools. For resources, ordering information and examples, visit www.pedstest.com.

- The Developmental Screening Toolkit for Primary Care Providers, developed by the Boston Children’s Hospital, helps primary care providers understand the need for validated and routine developmental screening; become familiar with screening tools that can be used in primary care; choose strategies for implementing a new tool in the primary care setting; overcome obstacles to integrating routine screening into practice; and create a referral system for management of children identified with possible developmental needs. Available at www.developmentalscreening.org.

**Healthy Home Environments**

- Healthy Homes Coalition of West Michigan’s vision is that all children will grow up in healthy homes free of environmental hazards. The Coalition accomplishes this through policy impact, advocacy, outreach, direct services and continuous collaboration. The website includes resources for parents and professionals, available at www.healthyhomescoalition.org.
ENDNOTES


2. Annie E. Casey Foundation, EARLY WARNING! Why Reading By the End of Third Grade Matters, (Baltimore: Annie E. Casey Foundation, 2010).


10. In this document, the terms “families” and “parents” are used interchangeably to indicate the adults who have primary responsibility for a child.


18. These examples are used with permission from: Frances Page Glascoe and Nicholas S. Robertshaw, PEDS:Developmental Milestones: A Tool for Surveillance and Screening (Nashville: Ellsworth & Vandermeer Press, LLC, 2008). While these skill-based items are adapted from a validated developmental screening tool, this list is not a substitute for screening a child with a validated tool—such as the Ages and Stages Questionnaires, PEDS (the Parents’ Evaluation of Developmental Status), and PEDS:DM (PEDS:Developmental Milestones).

19. www.nursefamilypartnership.org

20. www.healthyfamiliesamerica.org/about_us/index.shtml


23. See note 18.


25. Hart and Risley, Meaningful Differences.


28. For additional information about the Los Angeles County STEP program to improve the quality of child care, see: http://ceo.lacounty.gov/ccp/step.htm. This website outlines quality standards for center- and home-based care in the six quality areas, provides specific criteria for determining the “step” or level of care in each area, identifies resources, and provides results of the evaluation of the project to pilot these standards.


33. See note 18.


46. Chang and Romero, Present, Engaged and Accounted For.


50. Duursma, Augustyn and Zuckerman, “Reading Aloud to Children.”

51. Basch, “Healthier Students Are Better Learners.”


56. Current federal recommendations call for immunizing young children on a specific schedule against commonly occurring diseases, such as measles, mumps, chickenpox and pneumonia. See CDC immunization schedules, available at www.cdc.gov/vaccines/schedules/index.html.


65. Ibid.


67. CLASP, “Putting Children and Families First.”


72. Ibid.

73. For additional information about the Ages and Stages Questionnaires, see http://agesandstages.com. For information about the Parents’ Evaluation of Developmental Status (PEDS) and PEDS:Developmental Milestones (PEDS:DM), see www.pedstest.com.


75. Ibid.


89. Committee on Environmental Health, American Academy of Pediatrics, “Lead Exposure in Children.”


96. Institute of Medicine of the National Academies, “Accelerating Progress in Obesity Prevention.”

97. Kaphingst and French, “The Role of Schools in Obesity Prevention.”


106. www.cdc.gov/ncch/lead/tips.htm


108. www.aafa.org/display.cfm?id=8&sub=42


111. Funding was provided by the Maryland Department of Housing and Community Development, the Baltimore City Weatherization Assistance Program, the U. S. Department of Housing and Urban Development’s Office of Healthy Homes and Lead Hazard Control, Maryland Energy Administration, the Baltimore City Community Development Block Grant Program, the Annie E. Casey Foundation and the Osprey Foundation.
ACKNOWLEDGMENTS

The team that wrote Growing Healthy Readers was coordinated by Jeanne Jehl and included Margaret Dunkle, Becky Miles-Polka, Rachel Morrison, Gena O’Keefe and Ann Rosewater.

We are grateful to the many individuals who provided important information and insight for Section IV: Health and Learning Issues at Each Developmental Milestone, including: Frances Page Glascoe and Nick Robertshaw, developers of the PEDS: Developmental Milestones screening tool; Rebecca Dineen of the Baltimore City Health Department; Lisa Bernstein of the What to Expect Foundation; Susan Bertonaschi, Director of Health Promotion with the Atlanta Civic Site; Ellen Galinsky, President and Co-Founder of the Families and Work Institute; and Hedy Chang and Cecelia Leong of Attendance Works!.

For their contributions to Section V: Strategies for Improving Health and Learning from Birth through Third Grade, we also wish to thank: Steven Vogler, MD, Medical Director of Reach Out and Read Colorado; Wendy Hobson-Rohrer, MD, Medical Director of South Main Public Health Clinic and Medical Director of Reach Out and Read Utah; Alice Warner-Melhorn of the W.K. Kellogg Foundation; Kelli Rayford, Interim Director of the Georgia Department of Public Health’s Infant and Child Health Unit; Casey Seidenberg of Nourish Schools; Dinah Frey of Hunger-Free Colorado; Principal Julie Fahey of Queen Palmer Elementary School in Colorado Springs, CO; and Ruth Ann Norton and Beth Bingham of the Baltimore Green and Healthy Homes Initiative.
