CHSC Social Determinants Notebook
Final Report

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Introduction and Overview

Iowa is a recognized leader in the provision of child health services that improve healthy child development, particularly for young children. The state has many exemplary programs, services and initiatives, and many champions for reform. While Iowa is on the cutting edge of efforts nationally to transform child health practice to one that recognizes and addresses social as well as medical determinants of health, this transformation is in its early stages. Iowa is in the position to much more intentionally and comprehensively respond, but to do so will require the development of an intentional infrastructure for this transformation.

This notebook provides the research, evidence and practice background for taking on this challenge – with an emphasis upon how the health practitioner community can respond effectively to social as well as medical determinants of health. It is arranged in a series of tabs meant to provide a summary of the topic, and supporting documentation for readers seeking additional information. Taken together, the nine tabs and the materials behind them provide the basis for taking action in Iowa. They also point to areas where, through action, gaps in information and knowledge can be filled.

First is a basic rationale for transforming Iowa’s young child health system; following that is a summary of the research, evidence and practice background.

Following this introduction is a summary of the nine tabs.
Summary of Tabs

Tab 1
Making the Case for Transformation of Child Health Care in Iowa

Health begins where children live, learn and play: in their families and neighborhoods. That fact underlies all efforts to address the social as well as medical determinants of health in young children. Here is a summary of medical science and research around supporting the healthy development of children.

1. Young child healthy development is a function of biology, medical care – and social and physical environment.
2. Health practitioners play an important role in encouraging healthy child development not only by addressing medical needs but also by screening for and initially responding to the non-medical factors harming healthy development.
3. There is a strong interplay between social determinants of health and clinical health conditions, particularly around social, emotional, cognitive and behavioral development.
4. There is a growing body of evidence and exemplary practice that shows how child health practitioners can respond effectively to social determinants of health.
5. Moving from exemplary to mainstream practice requires an intentional effort to support child health practitioners in making changes in their practices.

Tab 2
Definition of Social Determinants of Health

Social determinants of health refer to the social and economic factors that contribute to children’s healthy development. For young children, social determinants include family social and economic factors that contribute to providing consistent, nurturing, home and community environments and meeting essential needs. Addressing such social determinants is critical to providing a life course approach to child health and development.

A growing body of literature also focuses upon the specific impact of social exclusion on healthy development, particularly through discriminatory practices which isolate children away from supportive environments and which also form a basis for examining issues of health equity.

Tab 3
Impact of Social Determinants on Healthy Child Development

Failure to meet essential physical needs (everything from nutrition and housing to medical care) impedes growth and weakens the immune system, making children more susceptible to injury, illness and suboptimal physical development. Failure to provide consistent nurturing (particularly for the youngest children) affects brain development and produces behavioral and emotional problems and developmental delays.

Running contrary to the centuries-long pattern of improvements in health and well-being, American children now face the prospect of being less healthy and living shorter lives than their parents. This pattern is due to the increase in diseases like obesity, diabetes and asthma, profound inequities in child health and the harmful effects of toxic stress on the most at-risk families.
**Tab 4**

**Prevalence of Social Determinant Risk Factors that Jeopardize Healthy Child Development**

While it is not possible to be precise, between one-fifth and two-fifths of all young children have family risk factors recognized to jeopardize healthy development, with the lower figure more representative of serious or multiple risks and the latter figure more representative of some risk that could result in future developmental difficulties. Risk factors include single parenting, household poverty, low education status and residence within disinvested neighborhoods.

The children and families experiencing these factors are candidates for prevention or early intervention services to strengthen their parenting and the protective factors around their children. Prevention services by definition can never be targeted only to those for whom future problems would arise, but effective services to this population of families can significantly reduce their overall risk and provide benefits to most children and their families.

**Tab 5**

**Prevalence of Behavioral, Development and Physical Health Conditions Among Young Children that are the Result of or Exacerbated by Social Determinants**

The prevalence of these family and community risk factors/social determinants closely corresponds to and can impact or exacerbate recognized early childhood developmental problems.

Currently, it is estimated that as many as 18 percent of all children aged two to five have diagnosable mental health conditions that require treatment and response. It is estimated that 12 percent of infants and toddlers have developmental delays or risks for whom early intervention (Part C) services are appropriate. As many as one-half of all children start school requiring some special attention or response to remediate a delay in their cognitive, social, emotional, or physical development, and one-fifth have delays across multiple domains of school readiness that are likely to require substantial remediation and response, if they are to learn at the same pace as their peers.

**Tab 6**

**Exemplary Health Practitioner Responses to Social Determinants that Improve Healthy Child Development**

As near universal points of contact with young children and their families and often as consistent and trusted authorities on child development, child health practitioners are in a key position to serve at least as first responders to social determinants of health. The concept of a “patient-centered medical home” for children includes a broad definition of the practitioner’s role in supporting healthy development. The American Academy of Pediatrics’ *Bright Futures* has established guidelines for well-child care that are both comprehensive and developmental in scope. In addition, there is a growing array of exemplary programs that incorporate three essential features to identifying and responding to all factors – medical and social – that affect healthy child development: (1) practitioner training and response using developmental surveillance protocols that incorporate social determinants of health; (2) care coordination that moves beyond referral to scheduling and follow-up responses to both other medical and professional and community services; and (3) community engagement that identifies and supports the use and sustainability of community services and
resources that respond to social determinants, particularly by connecting vulnerable and isolated families to networks of support.

Tab 7
Range of Programs in Iowa Designed to Address at Least Some Social Determinants of Health

Iowa has a range of programs and sources for funding, many with federal funding support, that are designed to strengthen parenting and the protective factors around children’s healthy development. Currently, these programs are separately financed and regulated, and their coordination and integration largely is left to the individual practitioners and local collaborative efforts to develop more coordinated systems. Early Childhood Iowa local boards provide a potential locus for this coordination, which, coupled with the 1st Five Initiative, provides at least a beginning infrastructure for coordinating and integrating this work.

Tab 8
Role of Part C in Addressing Developmental Issues and Concerns

For infants and toddlers, the Part C program within the Individuals with Disabilities Education Act (IDEA) offers a key opportunity for early response to both children and their families. For young children, it is essential that Part C be part of an overall systemic response that can address social determinants of health in the context of the child’s development.

Early ACCESS, the federal early intervention program in Iowa, operated through the Iowa Department of Education, provides direct services to infants and toddlers (ages birth to third birthday) with an established physical or mental condition likely to result in developmental delay. One of the purposes of Part C is to prevent developmental delays from becoming pronounced, through early identification and response. Under federal law, Part C represents an entitlement to service, but the federal funding is based upon a formula that provides a fixed amount of funding to states.

Tab 9
State Opportunities to Make Investments and Develop Policies that Produce More Systematic Responses to Social Determinants of Health

Iowa has many exemplary programs and initiatives to address social as well as medical determinants of young children’s healthy development – among them 1st Five, Project LAUNCH, Iowa’s medical home initiative, EPSDT outreach workers, Part C and Early Childhood Iowa. At the same time, there is no overall nexus or infrastructure for developing a cohesive statewide system for expansion, innovation and continuous improvement of developmental health services that address social determinants. There have been only modest investments in research and evaluation, and little of that has been devoted to interactive assessment approaches that produce continuous learning and improvement through the practice and experience of implementation.

Iowa could seek to take advantage of federal opportunities to create a more intentional infrastructure – such as a center for pediatric innovation and excellence – to fulfill this role. Federal provisions under the Affordable Care Act to create Centers for Innovation, accountable pediatric care organizations, and
community transformation grants all could contribute to creating this infrastructure. Other provisions within the ACA to expand Medicaid and CHIP emphases upon child health outcomes and the provision of preventive services and to require all child health insurers to incorporate evidence-based practices (Bright Futures) into their care are relevant. State lawmakers also have made specific investments in such practices through 1st Five and Early Childhood Iowa. The current movement of remediation services into the Medicaid behavioral health managed care contract offers additional opportunities to focus attention on addressing social as well as clinical determinants of health in responses to many of Iowa’s most vulnerable young children.
Making the Case for Transformation of Child Health Care in Iowa

**Summary:** Health begins where children live, learn and play: in their families and neighborhoods. That fact underlies all efforts to address the social as well as medical determinants of health in young children. Here is a summary of medical science and research around supporting the healthy development of children.

1. **Young child healthy development is a function of biology, medical care — and social and physical environment.**
2. Health practitioners play an important role in encouraging healthy child development not only by addressing medical needs but also by screening for and initially responding to the non-medical factors harming healthy development.
3. There is a strong interplay between social determinants of health and clinical health conditions, particularly around social, emotional, cognitive and behavioral development.
4. There is a growing body of evidence and exemplary practice that shows how child health practitioners can respond effectively to social determinants of health.
5. Moving from exemplary to mainstream practice requires an intentional effort to support child health practitioners in making changes in their practices.

Health begins where children live, learn and play: in their families and neighborhoods. That fact is the basis for all efforts to social as well as medical determinants of health in young children. Although there is more to learn in this area, much has already been established. Here is a summary of what we know.

1. **Young child healthy development is a function of biology, medical care — and social and physical environment.** The conditions in which children live have an enormous impact on their health, long before they ever see a doctor. Parents in particular play a critical role in their children’s health, as their child’s first and most important teachers, safety officers, counselors and health practitioners. A patient-centered approach to caring for young children requires efforts to educate, strengthen and support parents in their roles.

   - The first five years of life are critical to developing a life course trajectory for health, educational and social well-being.
   - Crucial to the developing brain during these early years is the establishment of family bonds and a nurturing and consistent home environment.
   - While medical care and treatment of clinical conditions are essential to responding to illness, injury and congenital conditions, medical care plays only a small role in affecting healthy development.
   - A child’s social and physical environment (the social determinants of health) has the largest impact upon healthy child development.
2. **Health practitioners play an important role in encouraging healthy child development not only by addressing medical needs but also by screening for and initially responding to non-medical factors harming healthy development.** Ideally, all children would have a “medical home” that provides the traditional health care services (identification and treatment of congenital abnormalities, illnesses and injuries) and regularly tracks the wide array of social factors contributing to healthy development.

- Particularly for very young children, health practitioners represent an almost universal point of contact with a professional community equipped to identify and respond to social determinants of health.
- In fact, the current standards for pediatric practice (the American Academy of Pediatrics’ *Bright Futures* guidelines) call for screening for and responding to children's developmental needs and trajectories, including anticipatory guidance (advice to parents) on their child’s development and screening for and offering early response to other social needs.
- Child health practitioners can play an important role in providing family-centered care and informing and influencing parents in how they care for their children.
- The Early, Periodic, Screening, Diagnosis, and Treatment (EPSDT) provision within Medicaid sets this general standard for providing care. Medicaid serves more than one-third of all children birth to five in the country, and over 60 percent of those with special health care needs or facing social circumstances that jeopardize healthy child development. EPSDT offers a mechanism for financing such comprehensive, developmental child health care.

3. **There is a strong interplay between social determinants of health and clinical health conditions, particularly around social, emotional, cognitive and behavioral development.** Both must be addressed within the context of primary, preventive and developmental health services.

- Children’s healthy development is dependent upon receiving essential care and nurturing in the first years of life, the period when the brain is developing and the child’s identity and relationship to the world is being formed.
- Failure to provide this essential care and nurturing can produce or exacerbate medical health conditions related to physical health, mental health and cognitive and social development.
- Continued connections between social and medical factors affecting development is essential to healthy development, with child health practitioners playing a continued role in both addressing medical health needs and supporting families in addressing social determinants of health.

4. **There is an emerging body of evidence and exemplary practice that shows how child health practitioners can respond effectively to social determinants of health.** This involves developmental surveillance and screening, anticipatory guidance and effective referral strategies including care coordination and connection to both professional services and community supports.

- Through developmental surveillance, child health practitioners can screen for social determinants of health, and by developing care coordination and connections to community resources as well as medical and developmental specialists, (as national exemplary initiatives such as Help Me Grow do) respond effectively to children’s needs.
- Iowa’s 1st Five Health Mental Development Initiative, a continuation of Iowa’s work with the Commonwealth Fund’s Assuring Better Child Health and Development (ABCD) Initiative, is an exemplary approach that builds partnerships between physicians and human-service providers.
5. Moving from exemplary to mainstream practice requires an intentional effort to support child health practitioners in making changes in their practices, creating stronger ties and connections to community resources, and providing additional supports to families so they can provide the environments their children need for success.

- Changing practitioner practice requires a “diffusion of innovation” approach that offers hands-on support to practitioners.
- Among the keys to changing practice are the availability of services that: help families in their roles; provide regular feedback to practitioners that shows positive results and responses; and that can track both success and challenge and make continuous corrections to improve results.
- Iowa has the elements of this “diffusion of innovation” infrastructure, but needs to scale these efforts to accelerate practice change and improve results.

Resources


TAB 2
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A growing body of literature also focuses upon the specific impact of social exclusion on healthy development, particularly through discriminatory practices which isolate children away from supportive environments and which also form a basis for examining issues of health equity.

Social determinants of health refer to social and economic factors that contribute to health. For young children, social determinants include family social and economic factors that contribute to providing consistent, nurturing, home and community environments and meeting essential needs. A growing body of literature also focuses upon the specific impact of social exclusion on healthy development, particularly discriminatory practices that isolate children away from supportive environments, that forms a basis for examining issues of health equity.

The National Research Council and Institute of Medicine’s *Children’s Health, The Nation’s Wealth* provides the following expanded definition of children’s health: The extent to which individual children or groups of children are able or enabled to (a) develop and realize their potential, (b) satisfy their needs, and (c) develop the capacities that allow them to interact successfully with their biological, physical and social environments.

*Healthy People 2010* visualizes children’s health as an interplay of social environment, biology, physical environment and behavior (Figure One). The healthy development of young children is important to setting a
trajectory for lifelong health and ensuring that the developing mind and body receive what is needed to grow. Brain research has been particularly influential in focusing attention on young children’s healthy growth and the importance of nurturing in the early years to provide a brain architecture and scaffolding for all subsequent development.

While medical care to treat injuries, illnesses, and biological conditions contributes to child health, there are much broader social determinants of health that must be recognized. These include family factors and community factors as well as individual ones. Healthy People 2020 goes on the describe the relative factors contributing to physical health as individual constitution and genetic factors (20 percent), bio-medical care (10 percent), lifestyle (50 percent), and environmental factors (20 percent), with the latter two constituting different “social determinants” of health.

The World Health Organization’s (WHO) Social Determinants of Health: The Solid Facts draws upon a wealth of international research to describe ten specific social determinants of health, all of which are malleable through public policy and societal action (Figure Two).

In many respects, these align with definitions of human capital, social capital, economic capital and physical capital that are being employed as cornerstone community building strategies. Human capital has even been further defined as including both individual and family capital (including resources, relationships and resiliency), recognizing the critical role families play in supporting children and their development.

Finally, it is important to note that there is substantial research from outside the health community on the factors that contribute to children’s healthy development which further stress the importance of social determinants of health and, in particular, the strengthening of protective factors and the promotion of family assets, as well as the

| FIGURE TWO |
| Social Determinants of Health from The Solid Facts |

1. **The Social Gradient.** Life expectancy is shorter and most diseases are more common further down the social ladder in each society. Health policy must tackle the social and economic determinants of health.
2. **Stress.** Stressful circumstances, making people feel worried, anxious and unable to cope, are damaging to health and may lead to premature death.
3. **Early Life.** A good start in life means supporting mothers and young children: the health impact of early development and education lasts a lifetime.
4. **Social Exclusion.** Life is short where its quality is poor. By causing hardship and resentment, poverty, social exclusion and discrimination cost lives.
5. **Work.** Stress in the workplace increases the risk of disease. People who have more control over their work have better results.
7. **Social Support.** Friendship, good social relations and strong supportive networks improve health at home, at work and in the community.
8. **Addiction.** Individuals turn to alcohol, drugs and tobacco and suffer from their use, but use is influenced by the wider social setting.
9. **Food.** Because global market forces control the food supply; healthy food is a political issue.
10. **Transport.** Healthy transport means less driving and more walking and cycling, backed up by better public transport.

reduction in risk factors. The Doris Duke Foundation’s Strengthening Families through Early Care and Education identifies five factors from the research that are essential to child abuse prevention:

- **Parental resilience**: The ability to cope and bounce back from all types of challenges.
- **Social connections**: Friends, family members, neighbors, and other members of a community who provide emotional support and concrete assistance to parents.
- **Knowledge of parenting and child development**: Accurate information about raising young children and appropriate expectations for their behavior.
- **Concrete support in times of need**: Financial security to cover day-to-day expenses and unexpected costs that come up from time to time, access to formal supports like TANF and Medicaid, and informal support from social networks.
- **Children’s social and emotional development**: A child’s ability to interact positively with others and communicate his or her emotions effectively.

Clearly, these same factors not only reduce the likelihood of child abuse and neglect, but also improve healthy development overall. Looking at a wealth of national and international research, the Dartington Social Research Unit in Great Britain, reviewed an extensive array of child abuse research and similarly identified the need for positive environments that include warmth and nurturing as critical to children’s healthy development, in many instances more important than simply the absence of conflict.

The National Education Goals Expert Panel, drawing upon *From Neurons to Neighborhoods*, established five domains for a child’s school readiness that again cover a broad definition of healthy child development: physical health and motor development, social and emotional development, language and literacy, approaches to learning and general cognition. All five domains contribute to the scaffolding for subsequent educational development and support and all of which involve individual, family, and community actions and roles.

There are various terms and concepts related to social determinants of health – including a “life course” approach (Our Children’s Health; Nation’s Wealth), social determinants, health equity and social exclusion – all of which have useful literatures and perspectives.

The Robert Wood Johnson Foundation (RWJ) has developed materials regarding how to convey these issues in a way that resonates with policy makers and the public. For these audiences RWJF suggests shifting language toward descriptions that are colloquial, values-driven and emotionally compelling, that focus on solutions versus the problem and implicitly acknowledge the notion of personal responsibility.
Resources


Impact of Social Determinants on Healthy Child Development

**Summary:** Failure to meet essential physical needs (everything from nutrition and housing to medical care) impedes growth and weakens the immune system, making children more susceptible to injury, illness and suboptimal physical development. Failure to provide consistent nurturing (particularly for the youngest children) affects brain development and produces behavioral and emotional problems and developmental delays.

Running contrary to the centuries-long pattern of improvements in health and well-being, American children now face the prospect of being less healthy and living shorter lives than their parents. This pattern is due to the increase in diseases like obesity, diabetes and asthma, profound inequities in child health and the harmful effects of toxic stress on the most at-risk families.

Failure to meet essential physical needs (nutrition, housing, clothing, exercise, medical care) impedes growth and weakens the immune system, making children more susceptible to injury, illness and suboptimal physical development.

Failure to provide consistent, nurturing support (particularly for infants and toddlers) affects brain development and produces behavioral and emotional (mental health) problems and developmental (cognitive) delays.

Over the last 200 years, the health and well-being of children in America has continuously improved, with advances in medicine and the treatment and prevention of infectious diseases playing a very significant role.

For the first time in this nation’s history, however, children face the prospect of being less healthy and living shorter lives than their parents. U.S. childhood obesity, diabetes and asthma rates have increased dramatically and are among the highest in the world. There are profound inequities in child health by income, ethnicity and geography. There is growing evidence on the role of toxic stress – the destructive stress caused by parental depression, social isolation, community violence and discrimination – on children’s healthy development.

There also is growing clarity on what produces healthy children and sustains a healthy life course. Research in this area has broadened the medical definition of child health to include social and economic determinants of health and health equity. These social determinants of health can be measured at the individual, family and community levels, and can be used for clinical purposes and for broader service planning and policy action.

First, they can be measured by practitioners within programs, for screening and referral purposes and to provide anticipatory guidance to parents. As health information technology advances and electronic medical records increase in their level of sophistication, it may even be possible to aggregate some information to
establish population-level indicators that can be used to identify particular areas of concern and track progress in addressing them, over time.

Second, social determinants can be measured through interview or survey data of parents and guardians to provide further population-level data that can delve more deeply into issues of family knowledge of child development, services and resources available to address child health concerns, and connections to the larger community.

Third, they can be measured using U.S. Census data and other administrative data sets. In many instances, it is possible to use these data sets to get information on the social determinants of health within small geographic areas, down at least to a census tract level.

**Practitioner level data collection.** Primary health practitioners use a diverse array of protocols for well child visits. The Parents Evaluation of Developmental Status (PEDS) is available for use for parents of children 0-8 years and raises ten questions about child development and behavior that health practitioners can follow-up on with parents of young children, which also point to areas where social factors may contribute to child development concerns. Ages and Stages Questionnaire (ASQ) and Ages and Stages Questionnaire – Social Emotional (ASQ-SE) provide a more detailed approach to identifying children’s development.

Iowa’s ABCD Initiative, now 1st Five, has developed a protocol for well-child visits of young children that are designed to begin to identify and respond to social determinants of health, particularly around parental depression. The challenge is both to get practitioners to use such protocols on a consistent basis and to be able to respond to issues related to social determinants, when they emerge, through direct anticipatory guidance or through referral to care coordination or community supports.

In addition to protocols for well-child visits, there also is the opportunity to identify and begin to respond to social determinants of health at other critical points in contacts with professional systems. The Department of Public Health in Iowa pioneered a touch-screen, patient-directed screening tool at the birth of a child that mothers could use which not only identified social determinants of health but also provided mothers with practical information about services, supports, and information that could help them. Healthy Families America has long used a basic screening tool at the birth of a child to determine families for whom its home visiting services are most likely to be helpful.
<table>
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<tr>
<th>Domain of Well-Child Care</th>
<th>Outcome at School Entry</th>
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| Child Physical Health and Development | - All vision problems detected and corrected optimally  
- All hearing problems detected and managed  
- Management plans in place for all chronic health problems  
- Immunization complete for age  
- All congenital anomalies/birth defects detected  
- All lead poisoning detected  
- All children free from exposure to tobacco smoke  
- Good nutritional habits and no obesity; attained appropriate growth and good health  
- All dental caries treated  
- Live and travel in physically safe environments |
| Child Emotional, Social and Cognitive Development | - All developmental delays recognized and treated (emotional, social, cognitive, communication)  
- Child has good self-esteem  
- Child recognizes relationship between letters and sounds  
- Child has adaptive skills and positive social behaviors with peers and adults |
| Family Capacity and Functioning | - Parents knowledgeable about child’s physical health status and needs  
- Warning signs of child abuse and neglect detected  
- Parents feel valued and supported as their child’s primary caregiver and function in partnership with the child health care provider  
- Maternal depression, family violence and family substance abuse detected and referral initiated  
- Parents understand and are able to fully use well-child care services  
- Parents read regularly to the child  
- Parents knowledgeable and skilled to anticipate and meet a child’s developmental needs  
- Parents have access to consistent sources of emotional support  
- Parents linked to all appropriate community services |

**Note:** regular font bullets are those outcomes for which child health care providers should be held accountable for achieving. Italicized bullets are those outcomes to which child health care providers should contribute by educating parents, identifying potential strengths and problems and making appropriate referrals, but for which they are not independently responsible.
Resources


**Prevalence of Social Risk Factors that Jeopardize Healthy Child Development**

**Summary:** While it is not possible to be precise, between one-fifth and two-fifths of all young children have family risk factors recognized to jeopardize healthy development, with the lower figure more representative of serious or multiple risks and the latter figure more representative of some risk that could result in future developmental difficulties. Risk factors include single parenting, household poverty, low education status and residence within disinvested neighborhoods.

The children and families experiencing these factors are candidates for prevention or early intervention services to strengthen their parenting and the protective factors around their children. Prevention services by definition can never be targeted only to those for whom future problems would arise, but effective services to this population of families can significantly reduce their overall risk and provide benefits to most children and their families.

One-fifth of young children live in households that are in poverty, and two-fifths live in households below 200 percent of poverty, which is more reflective of the ability to meet basic economic needs. One-third live in single-parent families, with a majority of those where the single parent has a high school diploma or less. Maternal education level is the single most predictive indicator of child educational success.

At birth, two in five children are born at low birthweight, of adolescent or unmarried mothers, of mothers with no more than a high school diploma, or of mothers who have smoked or used alcohol during pregnancy. All these are related to child health risk and social determinants of health, and many children have two or more of these risk factors.

In addition, children and their families can live in neighborhoods with multiple risk factors that create risks of their own. Children of color disproportionately reside in these high-risk neighborhoods, where community-building as well as individual-service strategies are likely to be needed to ensure healthy child development.

In addition to developing tools and measures at the clinical practice level (see Tab 6), there has been survey work, at both the national and international level, to measure both social determinants of health and family reports on child health status. These surveys include important demographic data on income, family structure.
and other factors, but they also incorporate parental responses to questions that can be used assess social isolation or connectivity and social capital and community safety and support.

The National Survey on Children’s Health offers a fairly comprehensive set of questions that include both reports on child health outcomes and family and community factors that relate to social determinants. One analysis of the 2003 survey correlated eight social risk factors (parental education no more than high school, family income below 200 percent of poverty, single-parent household, Black/Hispanic child, child uninsured, measure of family conflict, measure of maternal mental health and measure of neighborhood safety) with four parentally reported child health outcome measures (child health status, child teeth status, child socio-emotional status and child overweight status) and found that multiple risk factors had a cumulative and statistically significant impact on all four measures of child health outcomes.

Child Trend analyses of the Early Childhood Longitudinal Survey at kindergarten (ECLS-K) database have shown that similar social risk measures impact children’s kindergarten status across cognitive development, socio-emotional development, and physical health, with children behind in one area usually also behind in one of the other areas and having much more adverse prospects for educational success the more areas they were behind.

Increasingly, there have been efforts to measure protective factors related to nurturing home settings and community social capital, as well as risk factors related to family violence, addiction or mental problems and community violence or environmental hazards. Validated scales from a small set of questions have been developed to produce reliable indicators of parental depression, family social isolation or connectivity, and overall community social capital. Research suggests that both the absence of risk factors and the presence of such protective ones are important to healthy child development.

Census data, through the American Community Survey, offers demographic information at many different geographic levels – state, county, city and even census tract (aggregating five years of data) – that is particularly important in describing economic determinants of child health. By drilling down to the neighborhood/census tract level, it is possible to get some surrogate measures for the levels of social capital at a neighborhood level, as well. For young children, in particular, place can have a powerful impact upon healthy development.

The National Neighborhood Indicators Partnership has been a leader in tracking both census data and administrative data down to the neighborhood level and identifying geographic areas for particular focus in improving child outcomes and healthy development. In general, NNIP members have been able to document a mismatch in services and supports to children with the areas where children are in greatest need for support. United Way of America and the Kellogg Foundation have been working with select communities to employ the Educational Development Index (EDI), pioneered and widely used in Canada, at the time of kindergarten entry as a way to identify and address social determinants of health and educational development. Federal support to states to develop longitudinal statewide data systems – with extensions to cover the preschool and post-secondary and well as the K-12 worlds – offers further opportunity to collect population-level data on social determinants of health and on educational and other child outcomes.

A Taxonomy for Measuring Determinants of Children’s Healthy Development. Clearly, multiple data collection tools are necessary to identify important determinants of child health and employ them at the practice, community
planning and policy levels to improve children’s healthy development. Fortunately, states, communities and practitioners do not have to start from scratch in this work. They can build upon existing structures and tools in further developing their information systems. Figure Five below is a beginning taxonomy for this information development.

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<th>A Taxonomy for Measuring Determinants of Children’s Healthy Development</th>
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**Take-Away Message.** Iowa has a great deal to build upon in identifying and responding to issues related to the social determinants of health, at the clinical practice, community planning and state policy levels. It will require leadership, however, to support cross-system efforts to collect and integrate data and to support primary child health practitioners in rigorously using protocols to address social determinants of health.

**National Resources**

**State Resources**


Outline of requests for Iowa birth data to determine levels of risk

Child health disparities chart
# Child Health Disparities

_Was this supposed to actually all be on the same page?_

## State of Iowa

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th></th>
<th>2009</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Total</td>
<td>Non-Hisp.</td>
<td>Total</td>
<td>Non-Hisp.</td>
</tr>
<tr>
<td>Low Birthweight</td>
<td>6.6%</td>
<td>6.3%</td>
<td>6.3%</td>
<td>6.0%</td>
</tr>
<tr>
<td>Late/No Entry Into Prenatal Care</td>
<td>27.0%</td>
<td>24.2%</td>
<td>27.0%</td>
<td>24.2%</td>
</tr>
<tr>
<td>Teen (15-19) Birth Rate</td>
<td>3.3%</td>
<td>2.8%</td>
<td>3.0%</td>
<td>2.8%</td>
</tr>
</tbody>
</table>

*Source: National Center for Health Statistics, National Vital Statistics System*

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th></th>
<th>2009</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Below Basic 4th Grade Reading Proficiency</td>
<td>18.8%</td>
<td>17.9%</td>
<td>*</td>
<td>42.3%</td>
</tr>
</tbody>
</table>

*Source: Iowa Department of Education, Iowa School Profiles*

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th></th>
<th>2009</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Children in Poverty</td>
<td>15.7%</td>
<td>13.0%</td>
<td>41.1%</td>
<td>*</td>
</tr>
<tr>
<td>Single Parent Families</td>
<td>30.9%</td>
<td>28.2%</td>
<td>71.0%</td>
<td>*</td>
</tr>
</tbody>
</table>

*Source: United States Census Bureau, 2009 American Community Survey*

<table>
<thead>
<tr>
<th>Foster Care Placement (0-17)/1,000</th>
<th>2009</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>9.6</td>
<td>7.3</td>
<td>44.9</td>
</tr>
<tr>
<td>10.7</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: United States Department of Health and Human Services, Administration for Children and Families*

*includes Hispanic*
Prevalence of Behavioral, Developmental and Physical Health Conditions among Young Children that are the Result of or Exacerbated by Social Determinants

**Summary:** The prevalence of these family and community risk factors/social determinants closely corresponds to and can impact or exacerbate recognized early childhood developmental problems.

Currently, it is estimated that as many as 18 percent of all children aged two to five years have diagnosable mental health conditions that require treatment and response. It is estimated that 12 percent of infants and toddlers have developmental delays or risks for whom early intervention (Part C) services are appropriate. As many as one-half of all children start school requiring some special attention or response to remediate a delay in their cognitive, social, emotional, or physical development, and one-fifth have delays across multiple domains of school readiness that are likely to require substantial remediation and response, if they are to learn at the same pace as their peers.

The prevalence of these social determinants closely corresponds to and can impact or exacerbate recognized early childhood developmental problems.

Currently, it is estimated that as many as 18 percent of all children aged two to five years have diagnosable mental health conditions that require treatment and response. It is estimated that 13 percent of infants and toddlers have developmental delays or risks who would qualify for early intervention (Part C) services.

As many as one-half of all children start school requiring some special attention or response to remediate a delay in their cognitive, social, emotional, or physical development, and one-fifth have delays across multiple domains of school readiness that are likely to require substantial remediation and response, if they are to learn at the same pace as their peers.

At age three years, there are profound differences in child health and language development by family socio-economic status, as well as physical health status. While enriched preschool experiences can help to close the socio-economic gap in “school readiness,” research suggests that, at best, it can reduce that gap only by one-fifth to one-quarter.

While there is not always state data available to confirm these estimates for Iowa, there is substantial data available for Iowa that points to similar levels of prevalence and certainly gives call to taking action to address these concerns.
**National Resources**


**State Resources**


Iowa survey data from national Child Health Survey in comparison with other states.
Exemplary Health Practitioner Responses to Social Determinants that Improve Healthy Child Development

Summary: As near universal points of contact with young children and their families and often as consistent and trusted authorities on child development, child health practitioners are in a key position to serve at least as first responders to social determinants of health. The concept of a “patient-centered medical home” for children includes a broad definition of the practitioner’s role in supporting healthy development. The American Academy of Pediatrics’ *Bright Futures* has established guidelines for well-child care that are both comprehensive and developmental in scope. In addition, there is a growing array of exemplary programs that incorporate three essential features to identifying and responding to all factors – medical and social – that affect healthy child development: (1) practitioner training and response using developmental surveillance protocols that incorporate social determinants of health; (2) care coordination that moves beyond referral to scheduling and follow-up responses to both other medical and professional and community services; and (3) community engagement that identifies and supports the use and sustainability of community services and resources that respond to social determinants, particularly by connecting vulnerable and isolated families to networks of support.

As near universal points of contact with young children and their families and often as consistent and trusted authorities on child development to parents, child health practitioners are in a key position to serve at least as first responders to social determinants of health. The concept of a “patient-centered medical home” for children includes a broad definition of the practitioner’s role in supporting healthy development. The American Academy of Pediatrics’ *Bright Futures* has established guidelines for well-child care that is both comprehensive and developmental in scope.

There are a growing array of exemplary programs to incorporate three essential features to identifying and responding to all factors, medical and social, that affect healthy child development: (1) practitioner training and response using developmental surveillance protocols that incorporate social determinants of health; (2) care coordination that moves beyond referral to scheduling and follow-up responses to both other medical and professional and community services; and (3) community engagement that identifies and supports the use and sustainability of community services and resources that respond to social determinants, particularly by connecting vulnerable and isolated families to networks of support.

These exemplary programs have different structures. They can be part of comprehensive medical practices or community health centers or they can be established through collaborations across multiple services within a community, working with family practitioners and nurse pediatric practitioners as well as pediatricians in individual practices. The 1st Five Initiative in Iowa has drawn from these exemplary practices in establishing both exemplary programs and a structure for diffusing those programs into widespread practice in the state.

Many of these exemplary programs have their own research bases that show their effectiveness in addressing social determinants and improving children’s healthy development. The Commonwealth Fund’s Assuring Better Child Health and Development (ABCD) Initiative has created new tools and strategies, including child
outcome goals and measures for child health primary practice, for supporting and financing such practices within state Medicaid programs.

In the end, however, parents remain their child’s first and most important teacher, safety officer, and health provider. Exemplary programs all have found ways to strengthen family capacity to provide nurturing and safe home environments. This includes access to some form of parenting education, home visiting, facilitated peer support, and social connections that provide ongoing support to parents in strengthening the protective factors around their children.

Dr. Ed Schor, who played a major role in the development of the Commonwealth Fund’s ABCD Initiative, has outlined a more expansive set of child health outcomes, also consistent with the guidelines for well-child care established in Bright Futures. This list includes responsibilities for practitioners to address many social as well as medical determinants of child health (Figure Four). While health practitioners are not fully responsible for all these child outcomes, they do have a role to play in screening for them and offering anticipatory guidance and referral to other resources to address them. There are a growing number of exemplary initiatives to fulfill these roles, through more comprehensive screening, increased care coordination, and stronger linkages to community supports and resources that extend beyond health services. Iowa is among several states that have developed statutory definitions of medical homes for children that incorporate many of these expectations.

There also are a growing number of “place-based” strategies that focus upon specific, usually poor neighborhoods, that seek to improve child health and overall well-being through better integration of health, education, human services, and workforce development strategies. The Child Outcomes Partnership (COP) supported by the California Endowment and Nemours, is one such effort to work within communities to improve overall health and well-being, from a long line of “comprehensive community initiatives.” What distinguished COP is its emphasis upon the health system as a potential hub for such activities.

**Resources**


Range of Programs in Iowa Designed to Address at Least Some Social Determinants of Health

**Summary:** Iowa has a range of programs and sources for funding, many with federal funding support, that are designed to strengthen parenting and the protective factors around children’s healthy development. Currently, these programs are separately financed and regulated, and their coordination and integration largely is left to the individual practitioners and local collaborative efforts to develop more coordinated systems. Early Childhood Iowa local boards provide a potential locus for this coordination, which, coupled with the First Five Initiative and its work, provides at least a beginning infrastructure for coordinating and integrating this work.

Iowa has a range of programs and sources for funding, many with federal funding support, that are designed to strengthen parenting and these protective factors around children’s healthy development. Currently, these programs are separately financed and regulated, and their coordination and integration largely is left to the individual practitioners and local collaborative efforts to develop more coordinated systems. Early Childhood Iowa local boards provide a potential locus for this coordination, which, coupled with the First Five Initiative and its work, provides at least a beginning infrastructure for coordinating and integrating this work.

The following are specific programs in Iowa that focus, at least in part, on addressing social, as well as clinical, determinants of healthy child development:

- Parenting education, home visiting, and parenting support programs funded under Early Childhood Iowa
- Home visiting services funded through HOPES-Healthy Families Iowa
- New federal evidence-based home visiting funds
- Infant and toddler services funded through Medicaid and EPSDT
- Remediation services, including family counseling, funded under Medicaid and scheduled to go into the state behavioral health managed care program
- EPSDT outreach services provided through Title V agencies and incorporating aspects of care coordination
- Part C and Part B services of the Individuals with Disabilities Education Act (IDEA) funded by both federal and state funds
- Federal Early Head Start programs and Head Start services (particularly family service workers under Head Start)
- Shared Visions family resource center services
- Parent engagement and involvement services funded under Shared Visions and Voluntary Preschool for All for three and four year-olds

In addition, families may receive counseling and support services that strengthen protective factors under other publicly-funded programs, including:

- Family development services under Temporary Assistance to Needy Families (TANF) and the Community Services Block Grant
WIC nutrition and general counseling support services
Family-centered casework services under child protective services

Further, several initiatives underway in Iowa are seeking to develop such integrated and comprehensive responses to at least some children and their families:

- 1st Five Health Mental Development Initiative
- Project LAUNCH
- Polk County Court Reform Project
- The newly-formed Partnership to Improve Child Health in Iowa (PI-CHI) and its focus on late pre-term births
- Iowa’s recent inclusion in the national Help Me Grow replication initiative.
- Community Circle of Care funded by the federal Substance Abuse and Mental Health Services Agency

State Resources

Child and Family Policy Center (2010). Environmental scan of the mental-health services available to children 0-8 and families, Polk County, Iowa. Prepared for Project LAUNCH.


Public Policy Center (2004). Health policy brief: Children & youth with special health care needs in Iowa. Iowa City: The University of Iowa.
Role of Part C in Addressing Developmental Issues and Concerns

Summary: For infants and toddlers, the Part C program within the Individuals with Disabilities Education Act (IDEA) offers a key opportunity for early response to both children and their families. For young children, it is essential that Part C be part of an overall systemic response that can address social determinants of health in the context of the child’s development.

Early ACCESS, the federal early intervention program in Iowa, operated through the Iowa Department of Education, provides direct services to infants and toddlers (birth to third birthday) with an established physical or mental condition likely to result in developmental delay. One of the purposes of Part C is to prevent developmental delays from becoming pronounced, through early identification and response. Under federal law, Part C represents an entitlement to service, but the federal funding is based upon a formula that provides a fixed amount of funding to states.

For infants and toddlers, the Part C program within the Individuals with Disabilities Education Act (IDEA) – the federal early intervention program – offers a key opportunity for early response to both children and their families.

Iowa’s federal early intervention program within IDEA, called Early ACCESS, provides direct services to infants and toddlers (birth to third birthday) with established physical or mental conditions likely to result in developmental delay. One of the purposes of Part C is to prevent developmental delays from becoming pronounced, through early identification and response. Under federal law, Part C represents an entitlement to service, but the federal funding is based upon a formula that provides a fixed amount of funding to states. States may choose to include children at family or environmental risk of disabilities in the eligible group, and eight states (but not Iowa) do so. Iowa does include pre-maturity within its definition, however, which many states do not. All children born prematurely are eligible for Part C screening to determine if they require services. In general, Iowa’s eligibility definitions are not as broad as allowable under federal law, nor are they considered narrow.

States can choose where the Part C program is located in their state and most states select either the Department of Public Health or the Department of Education. Iowa operates its Part C program through the Iowa Department of Education.

Currently, Iowa serves a higher proportion of infants and toddlers within its Part C program than the national average; a little over 3 percent of all infants and toddlers are served at any point in time. Several states, however, have emphasized their Part C programs as a primary early intervention service and serve over 5 percent of all infants and toddlers in their states. Iowa ranks eighth among states in serving infants (0-1 year-olds) and 19th overall. The higher ranking for infants may be because of Iowa’s inclusion of prematurity in its definition of eligibility for Part C.

In Iowa, the two most common referrals to Part C are through parental self-referral and child health practitioner referral. At the same time, surveys indicate that many primary care practitioners are not familiar
with Part C and the services it provides. In Iowa, Part C serves children from all socio-economic and racial and cultural backgrounds, but parental self-referrals are more likely to come from families with higher socio-economic backgrounds. In terms of the known prevalence of developmental disabilities and delays by socio-economic status, Part C serves a smaller proportion of qualifying children within low socio-economic status families.

Iowa not only has federal funding for Part C services, but also has supplemental state funding, and Part C services also may be eligible for Medicaid funding. In fact, Iowa has a small “infant and toddler” Medicaid service option that can be accessed through EPSDT. In addition, Iowa transfers some Part B funds to provide Part C services.

Resources

Data from Iowa on participation rates in Part C by child age and in comparison with other states.


Options for State Policies and Practices that Can Systematically Improve Young Child Development by Improving Response to Social Determinants of Health

**Summary:** Iowa has many exemplary programs and initiatives to address social as well as medical determinants of young children’s healthy development – among them 1st Five, Project LAUNCH, Iowa’s medical home initiative, EPSDT outreach workers, Part C and Early Childhood Iowa. At the same time, there is no overall nexus or infrastructure for developing a cohesive statewide system for expansion, innovation and continuous improvement of developmental health services that address social determinants. There have been only modest investments in research and evaluation, and little of that has been devoted to interactive assessment approaches that produce continuous learning and improvement through the practice and experience of implementation.

Iowa could seek to take advantage of federal opportunities to create a more intentional infrastructure – such as a center for pediatric innovation and excellence – to fulfill this role. Federal provisions under the Affordable Care Act to create Centers for Innovation, accountable pediatric care organizations, and community transformation grants all could contribute to creating this infrastructure. Other provisions within the ACA to expand Medicaid and CHIP are relevant such as: the emphasis upon child health outcomes; the provision of preventive services; and the requirement that all child health insurers incorporate evidence-based practices (*Bright Futures*) into their care. State lawmakers also have made specific investments in such practices through 1st Five and Early Childhood Iowa. The current movement of remediation services into the Medicaid behavioral health managed care contract offers additional opportunities to focus attention on addressing social as well as clinical determinants of health in responses to many of Iowa’s most vulnerable young children.

Iowa has many exemplary programs, services and initiatives to address social as well as medical determinants of young children’s healthy development. Some exist as demonstrations within specific places in the state seeking to develop exemplary systems of response, while others exist as individual elements or programs within the state system.

As importantly, Iowa has many champions for continued innovation, diffusion of effective practice, and excellence in the provision of comprehensive, developmental child health services.

At the same time, there is no overall nexus or infrastructure for the different aspects to developing a statewide system for expansion, innovation, and continuous improvement. There have been only modest investments in research and evaluation, and little of that has been devoted to interactive assessment approaches that produce continuous learning and improvement through the practice and experience of implementation.
In short, there is very little infrastructure for child health “systems transformation” and the exemplary programs and services themselves, while complementary to one another, often exist independently and do not produce the synergy that is possible.

Iowa could seek to take advantage of federal opportunities to create a more intentional infrastructure – a center for pediatric innovation and excellence – to fulfill this role. Federal provisions under the Affordable Care Act to create Centers for Innovation, accountable pediatric care organizations, and community transformation grants all could contribute to creating this infrastructure. Other provisions within the ACA to expand Medicaid and CHIP emphases upon child health outcomes and the provision of preventive services and to require all child health insurers to incorporate evidence-based practices (*Bright Futures*) into their care are relevant.

State lawmakers have made specific investments in such practices through 1st Five and Early Childhood Iowa. The current movement of remediation services into the behavioral health managed care contract offers additional opportunities to focus attention on addressing social as well as clinical determinants of health in responses to many of the most vulnerable young children in Iowa.

While, operating as it does today, Iowa will continue to make gains, the state is also at a point where it can substantially scale up, coordinate and expand its efforts to be the national leader in promoting healthy young child development. To do so requires development of a plan and the infrastructure to implement that plan.

**National Resources**


**State Resources**

Description of Medicaid child outcomes request