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Developing Core National Guidelines for Measuring and Tracking the Healthy Development of Young Children: Six Opportunities

Section One Overview

From 2002 through 2005, the School Readiness Indicators Initiative sponsored by the Ford, Kauffman, and Packard Foundations worked with 17-states to develop indicators of children's healthy development and school readiness that could be used to spur state action.

Each of the seventeen states developed measures to track children's health and development from birth to school entry, but all recognized that the available data was far less complete than existed for school-aged youth. Moreover, there existed wide variations in how measures were developed in different states to gauge children's readiness for school and there were not national guidelines that could facilitate more uniform state development of measures. At the same time, the process did yield useful state reports that informed policy and assembled a core set of indicators that states felt could serve as a basis for measuring young children's development.

Since completion of that Initiative, there has been more experimentation by states and communities in developing indicators of young child development, school readiness, and early elementary success, but there still is little consensus on explicit measures to employ nor any national development of core measures of guidelines for developing such measures. The federal government has supported states in developing statewide longitudinal data bases for children enrolled in the K-12 public education system, but states are only beginning to develop strategies for incorporating information about younger children into these systems.

There is a role for federal leadership in building upon the School Readiness Indicators Initiative and the subsequent state and federal work to further support states in developing state (and in most instances community) indicators of young child development that can be used to inform both practice and policy.

This paper will describe six specific actions that the federal government can implement to support states and communities in this effort. These are based upon opportunity points for collecting information on young children that can capture information on the

broad social determinants of healthy child development and children's own development across the five domains of physical health, language and literacy, social and emotional, approaches to learning, and general cognition.

While a variety of administrative data sets can provide information on the involvement of young children in different systems and the presence of identified issues, these six specific actions are designed to provide population-based information on overall development, where it is possible to obtain information on at least a representative sample of all young children in the state.

In each area, it is possible to begin to capture additional information that can speak more comprehensively to the developmental status of children that represents the scaffolding for future health, learning, socialization, and growth.

1. ***Information at kindergarten entry***. Over the last decade, many states have taken action to require school districts to conduct some form of child assessment at or near the time a child enters kindergarten. These kindergarten assessments run the gamut from very rudimentary measures of letter and sound knowledge to very comprehensive authentic assessments of children's development across the five domains of school readiness, augmented by parental reports and observations. Section Two describes the role the federal government could play in developing some core kindergarten assessment tools that could lead to improved state assessments and more comparability across them.

2. ***Information at birth***. Birth records currently represent the most universal information regarding young children that is available until the time children reach school age. Birth records played a key role in acquiring data about the needs of young children in the School Readiness Indicators Initiative, with information on birthweight, entry into prenatal care, maternal marital status, parental education, smoking and drinking during pregnancy, among other factors. At the same time, there are opportunities to obtain more information from parents, at the time of the child's birth, that can offer further information on the infants ecology and needs. Most mothers give birth in hospitals, and most are willing to respond to additional questions about their home conditions, wants, and needs, particularly when they may be able to use the information to access services or information. In particular, the technology now exists for patient-directed surveys on touch screens to capture important information on social and economic determinants of health, to provide helpful child health and development information back, and to identify possible service support systems.. Over time, this could become a standard practice that could yield state-level data on the status of children's environments at birth, as well as the clinical information provided on birth records. Ideally, the federal government could foster the development of a public domain system that could be augmented by local service information.

3. ***Information from child health visits***. The federal government has placed a great deal of attention to health records development and health information

technology and some, particularly under CHIPRA, to child health quality measures. Studies show that almost ninety percent of all children have a well-child visit at least annually during their earliest years, yet there is no information from these visits that currently can be aggregated to provide a statewide picture of children's health and development. The core set of child health quality measures currently being proposed is fairly limited. Section Three offers some additional recommendations regarding the development of this core set of measures, and the federal government could develop strategies for use in federal policy and by states to incorporate these into databases that could yield state-level information.

4. ***Survey data***. While the above can yield important and much more comprehensive information at birth and school entry than currently exists, there are still major needs to track the progress of children's development throughout the earliest years. This includes information on children's language and literacy development as well as their health status. Even a robust statewide data system from child health visits is unlikely to yield much important information about children's developmental status. To that end, survey data is needed that can provide regular state-level information. The National Child Health Survey is an excellent example of the role the federal government can play in this respect, but should be conducted annually. Moreover, it deserves to be expanded to cover issues related to care arrangements (which the U.S. Census has periodically provided in *Who's Minding the Kids*) and more specific child development issues across cognition, language, and approaches to learning domains. Ideally, the American Community Survey could be expanded in size to enable analysis at smaller geographic areas (e.g. census tracts) with smaller errors of estimate and need to combine fewer years for statistical validity.

5. ***Head Start data and statewide longitudinal data bases***. Many states have taken significant steps to develop preschool programs, but the data systems for state preschool are kept quite separately from those for Head Start. Although the federal government has providing leadership in getting states to develop statewide longitudinal data bases for students and has expanded the goals for those data systems to preschool information, it is not a simple task for states to incorporate Head Start data into those systems. Getting a comprehensive picture of preschool experiences, whether state preschool programs or Head Start or preschool programs for special needs (Part B of IDEA), is important in determining both what children are being served and the degree to which children's future school experiences are positive ones. Direction could be provided at the federal level to ensure greater integration of early childhood information into the statewide longitudinal data base, with a particular first emphasis upon Head Start data.

6. ***Early elementary data on absences***. As has often been noted, young children are notoriously unpredictable test takers and their development in the early years is neither linear nor consistent. At least until third of fourth grade, "high stakes"

testing has been denounced as both unreliable and potentially counterproductive. At the same time, the early elementary years do afford the potential for gathering information, particularly through the statewide longitudinal data base, that can inform school and state policy and practice. In particular, the Annie E. Casey Foundation has supported pioneering work to explore the issue of elementary attendance and its impact upon student learning. Incorporating guidelines for collecting information on elementary attendance by a child that can identify chronic elementary absence offers a very discrete and straightforward, but potentially broadly impactful way to identify and address barriers to early elementary success. Section Four provides a brief description of this issue and the rationale for requiring different ways for schools to report student attendance.

There are many more issues that go into developing data systems that can measure and track young children's healthy development in order to inform policy and improve practice. These five, however, suggest specific federal leadership roles and actions that could help support and improve state actions.

Section Two
Kindergarten Assessments: Toward a Core National Approach

Potential DRAFT Memo
From: Charles Bruner
To: Joan Lombardi and Jacqueline Jones, Data Quality Campaign

The Concept of School Readiness

What children know and can do at the time of kindergarten entry represents the basis for their learning and educational advancement in school. The National Educational Goals Panel, drawing upon the National Academy of Sciences' *From Neurons to Neighborhoods* and other research, defines a child's "school readiness" across five distinct domains of development:

- Physical well-being and motor development;
- Social and emotional development;
- Approaches to learning;
- Language and literacy; and
- General cognition.

Descriptions of these five domains are provided in Figure One. Most state early learning standards incorporate all five of these domains into their descriptions of what programs and services directed to young child development should focus upon in the early years, to best prepare children for kindergarten.

Individual young children may develop and advance rapidly in one domain and not in another but later quickly catch up. There is a wide range of what constitutes normative child development in the early years, but it is clear that a child's overall advancement on these domains during the first five years is important to subsequent learning and school success.

The concept of "school readiness" is important, because research has shown that children who are substantially behind in one, and particularly in more than one domain at the time of kindergarten entry are at substantial risk of school difficulties and lack of educational success. Moreover, schools that must deal with a large proportion of children who are behind at kindergarten entry, particularly around social and emotional development, face classroom challenges that can affect all children's learning.

<u>Kindergarten Assessment Development and Use in States and Communities</u>
At the same time, there currently is no national direction on how "school readiness," as an outcome for early childhood programs and services or as an input for early elementary child development and learning, can best be measured.

States and school districts have taken widely divergent paths in conducting kindergarten assessments that seek to determine what children know and can do at the time of school entry.

The research and policy community generally agrees that a broad-based kindergarten assessment instrument used to develop population-based indicators of children's school readiness should not be used as a "high stakes" testing tool regarding when any individual child is ready to enter kindergarten or what additional or remediation services that child may need.

At the same time, states and communities seeking to develop more results-accountable educational systems that can focus resources where they can be most effective need to be able to track children's school readiness and success. Particularly as states build their statewide longitudinal student databases, a measure of school readiness is needed.

Currently, states and school districts have independently developed a variety of school readiness measures, drawing upon three different approaches to data collection:

- Authentic assessments, or teacher observations of child development, generally across the five domains, often adapting their specific measures from work sampling or the educational development instrument (EDI);
- Standardized assessments of language and literacy (and sometimes general cognition) administered to a child at the beginning of the school year; and
- Parental reports and information gathering at the time of kindergarten entry, often focusing upon physical health.

While none are particularly reliable instruments at an individual child level, they all can offer valuable information about children's school readiness and preparation for success in school.

Authentic assessments. In particular, authentic assessments offer the opportunity to measure child development across all five domains of school readiness and be consistent with state early learning standards. The key to reasonable inter-subjective reliability in the administration of such authentic assessments is development of good instrumentation for observation of children and training of kindergarten teachers in its use. As use of such authentic assessments has increased, there has been substantial adaptation of different tools. Particularly with the EDI, application of the assessment at a neighborhood level to focus attention on neighborhoods where early learning activities and experiences need special focus and attention has showed promise in mobilizing activities to improve school readiness. Individual state instruments vary, both in number of assessment items and descriptions. As reported in *Measuring Children's School Readiness*, the number of actual assessment items varied across three states from 27 in Vermont, to 30 in Maryland and to 67 in Missouri Nonetheless, there is substantial commonality and overlap across these assessments. States generally have

adapted from the Work Sampling system developed by Sam Meisels, which contains over 60 items; the complete version of the EDI contains over 200 items.

Standardized language, literacy, and cognition assessments. Similarly, there are a wide range of standardized language, literacy, and cognition assessments, many developed by different testing and assessment businesses and associations and involve quantitative measurement. These are administered to individual students at a specific time, with responses recorded. The Dynamic Indicators of Basic Early Literacy (DIBELS) is a very simple two-scale measure that involves letter and sound recognition. Other instruments are much more extensive in assessing receptive vocabulary, numeracy, knowledge of shapes and colors, and other items. Most have shown to have cross-tester validity in assessing children, but they are generally limited to covering two of the five domains of school readiness, at best.

Parent reports. Parents are their children's first and most important teachers and know their children better than anyone else. They also can reinforce learning in the classroom and be participants in their child's early elementary education. Gathering information from them at the time of kindergarten entry can assist schools and teachers in addressing special aptitudes and needs of children and help to form relationships between parents and schools. Parents often have unique information on their child's special abilities and needs, however, parent reports are likely to be most useful on such questions as preschool involvement and physical conditions such as asthma. In some instances, parental information may be more accurate than that provided by medical records, but it is generally subject to substantial limitations as a metric that is reported comparably across teachers.

Current State Practice

Although not a required element in the federal No Child Left Behind legislation regarding assessments and testing, over the last decade many states have established kindergarten assessment requirements for their school districts. Some require specific testing of all students and developed a statewide instrument to do so – either a comprehensive authentic assessment or a standardized literacy and cognition assessment. Minnesota requires collection of information from a representative sample of entering kindergartners to track statewide progress in achieving school readiness. Some require districts to conduct assessments, but leave the selection of the instrument up to local districts. The National Conference of State Legislatures technical report, *State Approaches to School Readiness*, indicates that, of the 21 states that mandate a particular instrument, 10 states mandate one instrument that covers reading only (generally a standardized assessment), while 11 states use a more comprehensive assessment (generally an authentic assessment, based upon work sampling).

Toward a Core National Approach

There is a broad array of propriety instruments that have been developed for multiple purposes to assess student progress at all grade levels. Some are tied to specific curricula and some are tied to learning standards, while some are much more specifically focused upon a particular educational concern. The field of assessment in

early childhood, regarding preschool and kindergarten entry, has grown dramatically. As a result, a multitude of specific instruments are used.

The federal government could take a leadership role in supporting states in developing state-of-the-art assessment strategies without requiring states employ a specific kindergarten assessment instrument,. This could include specific federal work to develop:

- A core set of 20 to 30 authentic assessment measures that have the strongest validity and inter-rater reliability. The measures should do an effective job of capturing what children know and can do at the time of kindergarten entry, along with metrics and tools to provide to teachers on these measures;
- A standardized assessment that might be used in conjunction with the authentic assessment that would measure language, literacy, and general cognition, with specific reference to its use and adaptation for children with special developmental conditions and English language-learners;
- A parent questionnaire for completion at the time of kindergarten entry that can complement authentic and standardized assessments;
- Strategies and supports for incorporating this information into the statewide longitudinal database; and
- Technical assistance and a clearinghouse for best practices in using such assessments for continuous improvement purposes.

The ECLS-K assessment battery will be used on another nationally representative sample of children this fall. Allowing states to buy in to over-sample within their states to generate a statewide picture to compare with a nationally one would be an immediate option to support states.

There has been a great deal of good work within states to develop and use assessments and each state should not have to “reinvent the wheel” in developing kindergarten assessments. The federal government can play a leadership and facilitator role in developing a set of core assessment strategies for state and community adaptation and use.

Figure One

Five Dimensions of Children's School Readiness

Physical Well-Being and Motor Development	Social and Emotional Development	Approaches to Learning	Language Development	Cognition and General Knowledge
This dimension includes health status, growth, and disabilities. It also includes physical abilities like gross and fine motor skills, as well as conditions before, at, and after birth, such as exposure to toxic substances.	Social development refers to children's ability to interact socially. A positive adaptation to school requires social skills such as the ability to take turns and to cooperate. Emotional development includes a child's perception of him/herself, the ability to understand the emotions of other people, and the ability to interpret and express one's own feelings.	This dimension refers to the inclination to use skills, knowledge, and capacities. Key components include enthusiasm, curiosity, and persistence in completing tasks, as well as temperament and cultural patterns and values.	This dimension includes verbal language and emerging literacy. Verbal language includes listening, speaking, and vocabulary. Emerging literacy includes print awareness (e.g. assigning sounds to letter combinations), story sense (e.g. understanding that stories have a beginning, middle, and end) and writing process (e.g. representing ideas through drawing, letter-like shapes, or letters).	This dimension includes knowledge about properties of particular objects and knowledge derived from looking across objects, events, or people for similarities, differences, and associations. It also includes knowledge about societal conventions, such as the assignment of particular letters to sounds, knowledge about shapes and spatial relations, and number concepts (e.g. one-to-one correspondence of numbers and objects, and the association of counting with the total number of objects).

Source: Child Trends Research Brief. Washington, DC. October 2001, second printing

References: National Education Goals Panel
Neurons to Neighborhoods
Measuring Children's School Readiness
State Approaches to School Readiness

Section Three
Comments on Initial Set of Children's Healthcare Quality Measures

Note: These comments were submitted to the HHS regarding their core set of measures of child health quality, as part of their responsibilities under the Child Health Insurance Reauthorization Act of 2010 (CHIPRA).

The core set of children's health quality measures represents a good, but piecemeal, start at establishing a set of reportable measures, but we urge further work that includes more emphasis upon social determinants of health as expressed in the National Research Council and Institute of Medicine's *Children's Health, the Nation's Wealth* and included in the evidenced-informed guidelines of the American Academy of Pediatrics' *Bright Futures.*

While the initial set of child health quality measures may need to start with what is currently most likely to be measured, it also should move toward creating measures for outcomes that science shows are critical to children's healthy development and that can be addressed, at least in part, by comprehensive child health care, starting with primary and preventive well-child services. We are attaching an outcomes framework for well-child care that could serve as the basis for further developing such measures for young children, most of which are not included in the current list of measures. The following two measures could begin to address these outcomes:

- Comprehensive well-child visits that identify and respond to vision and hearing problems, provide anticipatory guidance to parents on nutrition, exercise, and exposure to tobacco, and create medical histories for children that include parental and social factors; and
- A regular source of clinical care (medical home) and demonstrated connections to care coordination and referrals to address identified non-medical needs, including parental depression and developmental delays and environmental factors such as exposure to lead.

We particularly appreciate inclusion of items 8 and 16 on the list but believe the developmental screening provision should be expanded to include appropriate response, referral, and follow-up to identified concerns and the EPSDT provision should be broadened to other important provisions such as vision and hearing and anticipatory guidance and response.

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Outcomes of Well-Child Care During the First Five Years of Life	
Domain of Well-Child Care	**Outcome at School Entry**
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 area 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.	

Sources:

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Simpson, L., Fairbrother, G., Hale, S., & Homer, C. (2007). *Reauthorizing CHIP: Opportunities for promoting effective health coverage and high-quality care for children and adolescents.* New York, NY: The Commonwealth Fund.

Section Four
Measuring School Attendance as Part of Data Quality: Opportunities for States and the Federal Government to Establish Measures of Chronic Early Absenteeism to Promote Improved Educational Success

Preliminary Draft Statement: Hedy Chang, Charles Bruner, and Martin Blank, January 20, 2010 [Hedy is reworking for broader use]

National research shows that one in ten kindergarten and first grade students miss at least one month of school. These children are not truant; most 5- and 6- year-olds don't stay home without the knowledge of an adult who can call in an excuse. Still, they are chronically absent. Moreover, in some school districts, the proportion of early elementary students who are chronically absent exceeds thirty percent. Chronic absenteeism is most prevalent among low-income and minority children and within inner-city neighborhoods.

While the reasons for these absences are varied and often are quite legitimate, they affect students' ability to keep pace in school and learn. Chronic early absence is a sentinel early indicator of future educational problems. Chronic absenteeism that is widespread within a school makes overall education problematic for the entire classroom.

Fortunately, chronic early elementary absenteeism, when identified, often can be corrected. Schools that have systematically tracked chronic early elementary absence and taken actions to work with families to address it have been successful in reducing chronic early elementary absenteeism.

The first step in this process is for schools to collect and report data on chronic early elementary absenteeism.

States and the federal government have an opportunity to establish this capacity as statewide longitudinal databases are further developed for students. The federal government can provide guidance and direction to states in incorporating relevant measures into these data bases, and states can take action to ensure their statewide longitudinal databases provide this information.

At the school level, this does not require the collection of new information; but it does require reporting into the statewide longitudinal database in different ways than most states now require.

Metrics for measuring chronic school absenteeism require reporting, for each student, the number of days attended and the number of days the student was enrolled in school (to take into account students coming into or leaving a specific school during the school year). These two data points can then be used to determine the percentage of students who miss ten percent of more days of school (18 days, or nearly a month of school, for

a 180-day school year) and to begin to assess the students, their schools, and their neighborhood's characteristics. Obviously, schools can use such information throughout the year to develop early identification and response strategies to correct such absenteeism. This is attendance information that schools now collect on all students, although they do not usually report it or use it in this manner.

Currently, the most common metric for measuring absenteeism is "average daily attendance." In general, for early elementary grades, average daily attendance rates are at least ninety-five percent, which appears to show that there is not a problem with attendance in the early grades. At the same time, a ninety-five percent average daily attendance rate usually includes a very significant number of students (at least ten percent) that are chronically absent. Average daily attendance rates not only tend to mask any problem of chronic absenteeism; they do not enable further analysis of which students (by race, free and reduced meal, special education, or other designation) are most likely to be absent.

The second most common metric for measuring absenteeism relates to "unexcused absences" or "truancy." While there is some value for distinguishing between excused and unexcused absences, for early elementary students most absences are "excused," even when they relate to circumstances that can be corrected. If children are not in school, they do not keep pace with the educational program in the school and their learning is affected, whether the absences are excused or unexcused.

In developing quality data systems, those data systems should include measures of absenteeism at a student data level. There also is value in having a common metric across the states in this measurement, enabling cross-state and national as well as in-state comparisons and tracking of progress.

There is an adage, "you measure what you treasure." The value of measuring chronic early elementary absenteeism is that it represents the first step for identifying a key impediment to educational achievement and focusing attention on addressing it. Experiences from schools that have taken on this task have been very positive in reducing early elementary absenteeism, often at little or no additional cost to the district.

The Data Quality Campaign can be influential in this respect in the following ways:

- promoting the inclusion within school record-keeping systems and statewide longitudinal databases of individual student attendance (days attended and days enrolled) and reporting on chronic early elementary absenteeism;
- supporting a common metric for measuring chronic early elementary absenteeism (e.g.missing ten percent or more of school days during a year, for whatever reasons);
- encouraging the federal government to promote such a measure and to require or encourage states to include that within statewide longitudinal data bases;
- encouraging state governments to promote such a measure;

- encouraging the federal government to promote state and local actions to reduce chronic early elementary absenteeism and provide a federal locus for sharing best practices and building a stronger evidence base for the field;
- encouraging state governments to promote use of chronic early elementary absenteeism data by schools to reduce it, providing incentives and supports to achieve reductions, both at the overall school level and for different subgroups in the population.

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