

STATE HEALTH POLICY

STATE HEALTH POLICY BRIEFING PROVIDES AN OVERVIEW AND ANALYSIS OF EMERGING ISSUES AND DEVELOPMENTS IN STATE HEALTH POLICY.

This *State Health Policy Briefing* examines the efforts of 19 states, the District of Columbia and Puerto Rico to use measurement to support policy and practice changes that improve pediatric primary care providers' identification of children with or at risk for developmental delay. Measurement played an important role in making the case for change, developing and refining training targeted to primary care provider needs, and assess whether changes produced the intended effect.

NATIONAL ACADEMY
for STATE HEALTH POLICY

Briefing

A PUBLICATION OF THE NATIONAL ACADEMY FOR STATE HEALTH POLICY

APRIL 2009

Findings from the ABCD Screening Academy: Measurement to Support Effective Identification of Children at Risk for Developmental Delay

NEVA KAYE, JENNIFER MAY AND
COLLEEN PECK REULAND

Since 2000, the National Academy for State Health Policy (NASHP) has, in partnership with the Commonwealth Fund, supported state efforts to make policy and practice changes designed to improve the delivery of child development services. Most recently, NASHP formed the ABCD Screening Academy — to make the policy and practice improvement needed to move the use of validated, objective developmental screening tool as part of regular well child care from a 'best practice' to a 'standard or practice.'

Based on the successful pioneering efforts of eight states (see About ABCD Text Box) to develop and test models for improving the delivery of developmental services, NASHP defined common goals and a common approach that were likely to enable other states to achieve similar success in a shorter time with fewer resources. The 21 ABCD Screening Academy members¹ (19 states, the District of Columbia, and Puerto Rico) adopted common goals of policy and practice improvements that support developmental screening by pediatric primary care providers. Members further agreed to incorporate the common approach into their efforts to achieve project goals. One element of the approach was collecting and using meaningful data to motivate, shape, and

TABLE 1: OVERVIEW OF MEASUREMENT ACTIVITY IN THE ABCD SCREENING ACADEMY

State	Screening rates (proportion of children screened using a validated tool)			Additional evaluative activity	
	Defined measure (identified data source, numerator, and denominator, and how the data would be collected and reported)	Produced measure		Defined activity	Produced results
		Pre-intervention	Post-intervention		
Alaska	•	•	•	•	•
Alabama	•	•	•	•	
Arkansas	•	•	•	•	•
California	•	•	•	•	
Colorado	•			•	•
Connecticut	Identified data source-only—not included in count				
District of Columbia	•	•	•	•	•
Delaware	•	•	•	•	•
Kansas	•	•	•	•	•
Maryland	•	•	•	•	•
Michigan	•	•	•	•	•
Minnesota	•	•		•	•
Montana	•	•	•	•	
New Jersey	•			•	
New Mexico	•	•	•	•	
Ohio	•	•		•	
Oklahoma	•	•	•	•	
Oregon	•			•	•
Puerto Rico	•			•	•
Virginia	•	•	•	•	•
Wisconsin	•	•		•	
Total	20	16	13	20	12

track both policy improvements and practice improvements. Specifically, ABCD Screening Academy members:

- *Measured the percent of young children screened with a validated, objective screening tool to identify concerns related to developmental, and/or social and emotional development.* The states collected and reported baseline (pre-intervention) and follow-up (post-implementation of the intervention) data.
- *Conducted an additional evaluative activity.* States had full flexibility to select any type of evaluative activity that would support their efforts.

NASHP provided technical assistance to support the members' efforts. Further, recognizing the difficulty and importance of effective measurement, the Commonwealth Fund provided additional technical assistance resources to Screening Academy members through a grant to the Child and Adolescent Health Measurement Initiative (CAHMI) at the Oregon Health and Science University.

This briefing reports on the experience of the ABCD Screening Academy members in data collection and use. Many of the ABCD Screening Academy members are still engaged in measurement, as well as policy and practice improvements

(See Table 1). But, the experience to date provides valuable information for others seeking to use data to support policy and practice improvements, especially in the delivery of child development services.

Three immediate suggestions for those initiating such work are:

- ensure that plans for measurement are in place at the start,
- identify an individual who is responsible for managing all measurement activity, and
- pilot measurement approaches early in the effort.

MEASURING SCREENING

All Screening Academy members worked to make both the practice and policy improvements needed to incorporate developmental screening into well-child care. There were variations among the specific measurement approaches implemented by screening academy members because there were slight differences among them in their approach to achieving the common goal. For example,

- Most members followed the American Academy of Pediatrics' (AAP) recommendation that pediatric primary care providers use a developmental screening tool at the 9, 18, and 24 or 30 month well-child visits, but some allowed screenings at other times or by providers other than the primary care provider.
- Most members encouraged providers to use the screening tools recommended by the AAP, but some allowed the use of other screening instruments.

Different approaches to achieving the goal of screening required the measurement efforts to be customized to the screening process so that meaningful data could be collected. Different members also had access to different resources for measurement (e.g. data sources, staff ability to collect data).

Accordingly, each was allowed to develop its own approach to measuring the 'screening rate.' Each could choose the source of data, as well as define the numerator and denominator. Finally, those states that were working to measure screening rates in practices that reported that they did not use a validated screening tool prior to participation in the Screening Academy were allowed to assume a baseline (pre-intervention) screening rate of zero percent. By July 2008

AMERICAN ACADEMY OF PEDIATRICS RECOMMENDATIONS:

The AAP recommends that developmental surveillance be performed at every well-child visit and that a screening tool be administered at the 9-, 18- and 30-month visits and for those children whose surveillance yields concerns about delayed or disordered development. Many payers do not reimburse for the 30-month visit. In those circumstances the AAP recommends that practices instead administer the screening tool at the 24 month visit.

Source: American Academy of Pediatrics, *Identifying Infants and Young Children with Developmental Disorders in the Medical Home: An Algorithm for Developmental Surveillance and Screening* (July 2006).

(the end of the intense period of technical assistance), 20 of the 21 members (all except Connecticut) had defined their approach to computing a screening rate. Connecticut identified their data source, but did not reach closure on the specifics of the definition of 'screening rate.'

DATA SOURCE

The 21 members that identified their data sources reported using medical records, claims data, and/or parent survey as the source for the data needed to produce the measure.

- *Seventeen members used medical records: Alaska, California, Colorado, Connecticut, the District, Delaware, Kansas, Maryland, Michigan, Minnesota, Montana, New Jersey, New Mexico, Oklahoma, Puerto Rico, Virginia, and Wisconsin.* The medical record is the documentation of a patient's medical history and care. Medical records are either paper-based or electronic. The term 'medical chart' is used both for the physical folder for each individual patient and for the body of information which comprises the total of each patient's health history. Therefore, tally sheets or logs maintained by the practice are included in this category.
- *Six members used claims data: Alabama, Arkansas, Colorado, Connecticut, Minnesota, and Ohio.* Claims data comes from the claims that providers submit in order to obtain payment for services provided. Each claim includes information and codes that, among other things, identify the service(s) provided, when it was provided and who received it. All but one state that used claims data reported that the Medicaid agency produced the

measure based on paid claims. Alabama worked with a pediatric practice that produced the data from information it maintained on claims submitted.

- *Three members used parent survey: Michigan, Minnesota, and Oregon.* These members used one or more items from the Promoting Healthy Development Survey (PHDS), National Survey of Early Childhood Health (NSECH), or survey provided in the “Setting the Stage for Success” toolkit. Studies have shown that parents can be reliable and valid reporters about well-child care provided.
- *Four members used multiple sources of data:* Colorado and Connecticut used medical records and claims data, Michigan used medical records and parent survey, and Minnesota used all three sources.

Eleven of the 13 members that produced both a pre- and post-intervention measure by July 2008 used medical records as the source of data. Members that used medical records reported that they needed to work closely with the practices to define the measure and the role of the practice in collecting the data. Each developed detailed measurement specifications that clearly defined how to examine the medical charts. However, they also found once the plans for measurement were in place, the charts yielded a significant amount of information beyond screening rates and that the process could be standardized to reduce time burden. The structure of the Screening Academy, which explicitly fostered an active, recognized partnership for improvement among states, practices, and others, facilitated collaboration for measurement. In many cases, office staff were willing to conduct some of the medical chart reviews. However, members who took this approach found that they needed to devote more resources (mostly staff time) throughout their projects than members using claims data.

Members using claims data experienced a delay in collecting their measurement due to the time needed both by providers to submit claims and by payers to process them. Those that used claims data as the source of information on screening did so because they wished to develop a measure that could be part of existing measurement efforts using claims data (and therefore there were pre-established resources for measurement), and/or that could be scaled up to measure performance at the state level. In addition to the lag time for collecting the information, some of these members also

found that not all providers were using the procedure code that indicates a screening was conducted (CPT code 96110).

DEFINING THE MEASURE

In defining their measures, members needed to first come to an agreement on how the screening was to be conducted. Then, based on this agreement, they needed to define the denominator (which children should be screened), numerator (what activity counts as “administering a validated screening tool”), and sample size (all children who should be screened or subset of those children). In other words, the measurement efforts needed to be sensitive to the screening efforts.

Most members were seeking to support providers’ efforts to implement the AAP recommendations for developmental screening, which calls for using a developmental screening tool that meets certain requirements at the 9, 18, and 24 or 30 month visits. As a result it is not surprising that all 20 members that defined their measure defined their numerator and denominator based on the AAP recommendation. (Table 2).

- Sixteen members measured the percent of children who received screenings at one or more of the well-child visits recommended by the AAP (e.g., children aged 8-36 months who had a well-child exam or children who had a 9 month well-child exam);
- Five members measured the percent of children screened at least once during the time period(s) defined by the AAP recommendations (e.g., children age 9-48 months)

In addition, most chose to collect data on only a subset of children who should have been screened. Most of these chose to stratify their sample by age group or well-child visit (e.g., the 9-month visit) so that they could assess performance at each of the recommended visits.

THE RESULTS

The measurement methods used by the ABCD Screening Academy members varied because they were tailored to the approaches used to implement screening. Variations existed in the group of children identified for measurement, how data were collected, and how the data were reported. Therefore, results reflect individual approaches.

By July 2007, 13 of the 21 members that had defined a measurement approach had completed both baseline (pre-intervention) and follow-up (post-intervention) mea-

TABLE 2. OVERVIEW OF APPROACH

State	Approach
Alaska	Office #1: Children 8-36 months old who had a well-child exam; Office #2: Stratified sample of children 9-62 months old who had a well-child visit.
Alabama	Medicaid enrolled children only. Stratified samples by the 9, 18, 24 and 48 month well-child visits.
Arkansas	Stratified samples by the 12, 18, and 24 month well-child visits.
California	LA sites: Stratified samples by the 9, 18, 24 month well-child visits; Orange County sites: Differed across sites, picked 1 or more well-child visits to sample from that ranged from the 4-24 month well-child visit.
Colorado	Varied by site. Sampled children who had the 6 month-60 month well-child visit.
Connecticut	Children 9 to 48 months.
District of Columbia	Stratified samples by the 9, 18 and 24 month well-child visits.
Delaware	Children who had the 9 month well-child visit.
Kansas	Stratified sample by children aged 9, 18, and 24 months old.
Maryland	Stratified samples by the 9, 18 and 24 month well-child visits.
Michigan	Stratified samples by the 9, 18 and 24/30 month well-child visits.
Minnesota	Stratified samples by the 9, 18 and 24/30 month and 4 year well-child visits.
Montana	Stratified samples by the 9, 18 and 24 month well-child visits.
New Jersey	Stratified samples by the 9, 18 and 24 month well-child visits.
New Mexico	Children who had the 12-month well-child visit.
Ohio	Stratified samples for children aged 13 months and children aged 26 months old.
Oklahoma	Stratified samples by the 9, 18 and 24/30 month well-child visits.
Oregon	Stratified samples by the 9, 18, 24 and 36 month well-child visits.
Puerto Rico	Stratified samples by the 9, 18, 24, 36, 48 and 60 month well-child visits.
Virginia	Children 4-48 months old who attended the WIC clinic.
Wisconsin	Children who had the 9, 18, and/or 24 month well child visits.

asures, three had completed the baseline measure and four had not completed either measure (Table 1). Eleven of the 13 members that reported both baseline and follow-up measures used either medical chart reviews or an internal logging/tracking system that captured screening activities at the demonstration sites. The remaining two (Alabama and Arkansas) used claims data. Four of the seven members that had not yet completed their measures used claims data. As previously discussed there is a lag between provision of care and submission and processing of claims. Finally, Puerto Rico planned to use medical records from the pilot sites as the data source but encountered significant delay in starting the pilots. As a consequence, this member did not have sufficient experience to produce the measure by July 2008.

All 13 members that completed both pre- and post-intervention measures reported an increase in the percent of children

screened using a standardized tool (Table 3). The average increase reported was 58 percentage points.

ADDITIONAL EVALUATIVE ACTIVITIES

All but two of the members (New Mexico and Wisconsin) collected additional evaluation data to inform policy improvement and practice spread. These members used 16 data sources. These data came from a wide variety of sources:

- The five most commonly used sources were: medical records, provider survey, claims data, parent survey, and Early Intervention/Pre-school Education referral data;
- Other sources were used by at least one member, these included: provider focus groups, key informant interviews, survey of community referral agencies, log sheets

TABLE 3. SCREENING RATES PRE-AND POST-INTERVENTION

State	Group Represented in Measurement Findings	Percent of Children Screened Using a Standardized Tool		Number of percentage points the rate increased
		Baseline	Follow-up	
Alaska	Office #1	0	81	81
	Office #2	0	88	88
Alabama	All sites (Three offices)	28	83	55
Arkansas	All sites (Two offices)	0	14	14
California	All sites in Los Angeles (Six offices)	19	80	61
District of Columbia	All sites (Three offices)	17.9	58.1	40
Delaware	Office #1	0	100	100
	Office #2	0	72	72
Kansas	Office #1	48	89	41
Maryland	Office #1	0	39	39
	Office #2	0	67	67
	Office #3	0	66	66
Michigan	All sites (Nine offices)	26	74	48
Montana	All sites (Two offices)	0	97	97
New Mexico	Office #1	15	100	85
Oklahoma	Office #1	0	58	58
	Office #2	0	27	27
	Office #3	0	27	27
	Office #4 and #5	0	0	0
Virginia	WIC Clinic	0	90	90

documenting any referral made out of the practice, and rate of meeting the 45-day rule for Individualized Family Services Plan (IFSP).

The most common source for additional evaluative data, the medical record, was used by 15 members. This data source was recommended to those that had decided to use medical records for the screening rate in order to maximize the value of the resources invested in conducting a medical record review (Table 4).

A few highlights include:

- Ten members worked with their early intervention agency and other referral entities to gather information about the number of referrals made, program eligibility, and follow-up care provided to children identified at risk.
- Nine members surveyed providers to gather information about their current perceptions of care, perceived barriers, and future improvement and outreach opportunities.² These surveys provided important baseline and/or evaluation information that guided spread efforts and enabled the “provider voice” to be heard.
- Eight members reviewed claims data to determine if the number of paid claims for administering a developmental screen and/or the proportion of children screened had increased in the demonstration sites. This data is valuable in identifying the total cost of developmental screening, as well as tracking the statewide spread of screening among providers and, consequently, the number of children being screened.
- Four members invested in the administration of a parent survey to gather information about the quality of care

TABLE 4: SUMMARY OF DATA DERIVED FROM COMMONLY USED DATA SOURCES

Data Source	Members Using Source	Examples of information derived from source
Medical Record 15 members	Alaska, Alabama, Arkansas, California, District of Columbia, Delaware, Kansas, Maryland, Michigan, Minnesota, Montana, New Jersey, New Mexico, Oklahoma, Puerto Rico	<ul style="list-style-type: none"> • Whether child was screened using standardized tool • Screening results documentation of a follow-up plan, referral steps taken • Whether referral agencies provided documentation back to the primary care provider • Whether child/family screened for psychosocial issues • Billing codes used
Provider Survey 10 members	Arkansas, Colorado, District of Columbia, Kansas, Minnesota, Montana, New Mexico, Oregon, Virginia, Wisconsin	<ul style="list-style-type: none"> • Current office systems and processes related to screening • Perceptions about screening tools • Barriers to implementing screening tools, referral steps taken when a child is identified at risk • Level of communication obtained from referral entities • Perceptions and barriers to referring to Early Intervention Training and education needs
Claims Data 8 members	Arkansas, Colorado, Delaware, Michigan, Minnesota, Ohio, Oregon, Virginia	<ul style="list-style-type: none"> • Proportion of children screened (96110 and 96111) who had a well-child visit • Number of paid claims (96110 and 96111)
Parent Survey 4 members	California, Michigan, Minnesota, Oregon	<ul style="list-style-type: none"> • Report of whether a screening tool was completed • Whether parent was asked about their concerns and received information to address their concerns • Whether anticipatory guidance and parental education was provided • Degree to which care provided was family centered

provided from the parent’s perspective. These surveys included items about whether parents’ informational needs were met and whether their concerns about their child’s development were addressed. These important aspects of developmental services can only be assessed through feedback obtained directly from the parent.

PUTTING THE PIECES TOGETHER: HOW MICHIGAN USED MEASUREMENT IN POLICY AND PRACTICE IMPROVEMENT

Michigan’s experience highlights the importance of data in policy and practice improvements. Their comprehensive measurement strategy involved gathering data from multiple sources and using stakeholders to inform and spread these improvements statewide.

Michigan conducted medical chart reviews in each of the nine pediatric offices that implemented standardized screening tools as

pilots for the ABCD Screening Academy. Findings were analyzed by each office, provider, and age-specific well-child visit. This specificity increased the value of the data by detecting variations in the care provided at each of the sites. For example, the combined data from the nine sites showed an overall increase in screening rates. The site-specific data, however, showed that some sites had not increased their screening rates for children of a specific age. The Screening Academy team targeted additional training and assistance to these sites.

Michigan conducted focus groups with pediatric providers. The results summarized provider perception of the benefits of screening, barriers to screening and referral, and the value of education, training and support to sustain quality improvements. The Screening Academy team used this data to plan their outreach to other providers across the state.

Michigan surveyed parents whose children received care in the pilot sites that implemented standardized screening. This

information complemented the data collected from medical charts and providers. The survey gathered quantitative data about parents' experiences with developmental surveillance, screening and referral. The Michigan team believed that a primary goal of developmental services is to identify strengths and risks of children and to educate and empower

parents to promote their child's development—and that the parent voice is essential to improving policy and practice.

Michigan continues to collect screening rates in the pilot sites using claims data. This data allows them to track whether efforts to clarify the policies related to Medicaid coding and reimbursement need improvement.³

ABOUT THE ABCD PROGRAM AND THIS SERIES:

Since 2000, the National Academy for State Health Policy (NASHP) has administered the Assuring Better Child Health and Development (ABCD) program. During this time NASHP has administered three projects.

From 2000-2003 and 2003-2006 NASHP administered two 3-year, multi-state learning collaboratives to develop and test Medicaid-based models for improving the delivery of early child development services to low-income children and their families by strengthening primary health care services and systems. A total of eight states participated in the collaboratives.

Based on the work of these pioneer states NASHP formed the ABCD Screening Academy. Nineteen states, Puerto Rico and the District of Columbia participated in the Screening Academy. They worked, with the support of NASHP, to improve identification of children with or at risk for or with developmental delays. Members

developed and implemented (or are implementing) policy improvements designed to promote, support, and spread the use of a standardized developmental screening tool as part of regular well-child care. Screening Academy members also supported selected primary care practices' efforts to incorporate standardized developmental screening tools into regular well child care—and continue to work to spread those improvements to other practices within their state.

This series of State Health Policy Briefings summarizes the findings from the ABCD Screening Academy members toward policy and practice level improvements and the results of these interactive processes as reported to NASHP in August 2008 by members. Each will also focus on the promising role of partnerships—broad stakeholder engagement—in initiating and sustaining a spread strategy to improve preventive care and developmental services for young children in primary care settings.

ENDNOTES

- 1 Over the course of the ABCD Screening Academy, three states, Maine, New York and Rhode Island, withdrew due to staff turnover and/or changes in leadership and priorities that precluded their ability to achieve the goals of their Screening Academy work
- 2 Wisconsin reported that they planned to conduct a survey, but did not report completing it.
- 3 See Policy Improvement Brief in Series for more details.

ACKNOWLEDGEMENTS

The National Academy for State Health Policy (NASHP) is grateful to the Commonwealth Fund for its ongoing support of the Assuring Better Child Health and Development (ABCD) Program. We are especially appreciative of the contributions and knowledge that Dr. Ed Schor, Vice President of The Commonwealth Fund, and Melinda Abrams, Assistant Vice President of The Commonwealth Fund brought to this initiative.

The authors' thanks also go to the ABCD Screening Academy core team members, especially the project leaders, in 19 states, the District of Columbia and Puerto Rico. They provided much of the material in these briefs as well as important feedback on an initial draft. They are to be commended for their leadership in developing innovative and sustainable programs to improve the health and well-being of children in their states.

The authors also wish to thank the myriad of national consultants whose time, energy and expertise were integral to the accomplishments of the ABCD Screening Academy.

Finally, many thanks go to Jill Rosenthal and Ann Cullen at NASHP for technical assistance and support of the ABCD initiative.

It is important to note that the views presented here are those of the authors. Any errors or omissions are also those of the authors.

NATIONAL ACADEMY for STATE HEALTH POLICY

About the National Academy for State Health Policy:

The National Academy for State Health Policy (NASHP) is an independent academy of state health policy makers working together to identify emerging issues, develop policy solutions, and improve state health policy and practice. As a non-profit, non-partisan organization dedicated to helping states achieve excellence in health policy and practice, NASHP provides a forum on critical health issues across branches and agencies of state government. NASHP resources are available at: www.nashp.org.

Citation:

Neva Kaye, Jennifer May and Colleen Reuland, *Measurement to Support Effective Identification of Children at Risk for Developmental Delay*, (Portland, ME: National Academy for State Health Policy, April 2009).

Portland, Maine Office:

10 Free Street, 2nd Floor, Portland, ME 04101 Phone: [207] 874-6524

Washington, D.C. Office:

1233 20th Street NW, Suite 303, Washington, D.C. 20036
Phone: [202] 903-0101