

Measuring and Reporting Quality of Health Care for Children: CHIPRA and Beyond

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ABSTRACT

BACKGROUND AND PURPOSE: The coming years could be a watershed period for children and health care as the nation implements the most significant federal health care legislation in 50 years: the Accountable Care Act (ACA). A year earlier, the American Recovery and Reinvestment Act (ARRA) set up a framework and road map for the eventual universal adoption of health information technology in its Health Information Technology for Economic and Clinical Health (HITECH) provisions, and the Children's Health Insurance Program Reauthorization Act (CHIPRA) legislation articulated a new and compelling vision for quality measurement in child health services. Each of these landmark advances in federal health policy contains relevant provisions for the measurement and improvement of the performance of the health system. Less clear is the extent to which the child specific framework articulated in CHIPRA will be preserved and built upon. Here, we set forth recommendations for ensuring that measurement and reporting efforts under CHIPRA, ARRA, and ACA are aligned for children.

POLICY THEMES AND RECOMMENDATIONS: Our findings around problems and recommendations are grouped into 2 broad areas: those that deal with helping states report and use

current measures, and those that deal with expanding the current measures. Recommendations include 5 aimed at focusing efforts on measure reporting and use: 1) help states build a measurement infrastructure; 2) provide specific technical assistance and support to states on how to collect, report, and use measures; 3) establish a national office for quality monitoring; 4) make available nationally data from states; and 5) ensure specific focus on child health in HITECH initiatives. Recommendations also include 3 aimed at extending what is being measured: 1) continue emphasis on insurance stability; 2) ensure that disparities can be measured and monitored; and 3) build measures that focus on system accountability and outcomes.

CONCLUSIONS: National health care reform provides the opportunity to extend coverage and dramatically restructure systems of care. It will be important to ensure that focus on health care quality for children be maintained and that the advances made under CHIPRA reinforce and are not diluted or overtaken by broader reform efforts.

KEYWORDS: CHIPRA; implementation; measurement

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THE COMING YEARS are likely to be a watershed period for children and health care as the nation implements the most significant federal health care legislation in 50 years. However, the Accountable Care Act (ACA) of 2010 is not the only driver of changes in health care delivery. A year earlier, the Health Information Technology for Economic and Clinical Health (HITECH) provisions of the American Recovery and Reinvestment Act (ARRA) set up a framework and road map for the eventual universal adoption of health information technology, and the Children's Health Insurance Program Reauthorization Act (CHIPRA) legislation articulated a new and compelling vision for quality measurement in child health services. Each of these landmark advances in federal health policy contain relevant provisions related to the measurement and improvement of the performance of the health system. What is less clear is the extent to which the child specific framework articulated in CHIPRA will be preserved and built upon.

CHIPRA provisions set the stage for quality measurement, monitoring, and reporting. Soon after its passage, the Centers for Medicare and Medicaid Services (CMS) entered into formal agreements with the Agency for Healthcare Research and Quality (AHRQ) and the Health Resources and Services Administration to implement the various provisions. An initial core measurement set published by the Department of Health and Human Services (DHHS)¹ set the process of quality monitoring in motion, and AHRQ's call for a set of Centers of Excellence under the Pediatric Quality Measurement Program to focus on improving existing measures and producing new measures set the stage for expanding the core measurement set.² At the same time, AHRQ has significant existing statutory authorities with respect to the development of quality measures. This includes promoting health care quality improvement by conducting and supporting research that develops and presents scientific evidence regarding all

aspects of health care, including methods for measuring and strategies for improving quality. In addition, AHRQ's role includes the ongoing development, testing, and dissemination of quality measures, including measures of health and functional outcomes, and the compilation and dissemination of health care quality measures developed in the private and public sector.

This article, like others in this special issue, reflects on the lessons learned over the last 18 months in identifying the core set of measures and implementing HITECH provisions in ARRA. It sets forth a set of specific recommendations for ensuring that measurement and reporting efforts under CHIPRA, ARRA, and ACA are aligned for children. Recommendations in this paper build on work conducted for earlier reports, which included input from over 35 key informants and experts and our observations of the implementation process to date.^{3,4}

BACKGROUND

Taken together, the 3 new pieces of legislation have the potential to move the quality agenda for children forward dramatically. A brief summary of the quality provisions of the 3 laws follows.

CHIPRA

Although states have had to report on quality since the original CHIP legislation in 1997, earlier requirements were vague and resulted in wide variation in state approaches and few comparable measures across states.⁵ The 2009 CHIPRA law represented the first time that consistent quality measurement and reporting had been

a centerpiece of Medicaid or CHIP legislation.³ Importantly, CHIPRA established that these provisions apply to both Medicaid and CHIP, and although reporting is voluntary and not mandatory, the provisions make a significant move toward a consistent strategy across the programs nationally and at the state level. The quality provisions in CHIPRA include not only measurement development (a core set and establishment of a subsequent measurement program to enhance the core), but also provisions around guidance for reporting performance by the states and demonstration programs to showcase and test child quality measures and promote their use (Table 1). These were awarded in early 2010, and 7 of the 10 awards (covering 18 states) include a focus on the use of the core measurement set released earlier that year by DHHS. CHIPRA also contains a provision and funding (\$5 million) for development of a model pediatric electronic health record format to support quality reporting. Finally, the CHIPRA provisions recognized that coverage stability is integrally linked to program performance overall, and that enrollment and retention of eligible children is an aspect of quality. Thus, states are now required to report on eligibility criteria, enrollment, retention, use of simplification measures, and access to care.

QUALITY PROVISIONS IN HEALTH REFORM LEGISLATION

The ACA contains several quality related provisions—one count found over 563 references to quality. Noteworthy aspects of these provisions include a focus on all populations across ages and types of insurance coverage. The ACA includes 5 sections addressing quality: develop an explicit national effort to establish a national strategy for

Table 1. CHIPRA Provisions Concerning Measuring and Reporting on Quality*

Provisions Strengthening Quality of Care and Health Outcomes

Developing an initial core set of health care quality measures	By January 1, 2010, the Secretary of DHHS will identify an initial recommended core set of child health quality measures for use by state programs. The measures include, but are not limited to, duration of children's coverage over a 12-month period, and a wide range of preventive services and treatments.
Establishing a pediatric quality measurement program	By January 1, 2011, the Secretary must establish an ongoing program that advances and improves pediatric quality measures for all children. This program will expand upon and increase existing pediatric measures and will award grants for developing and testing pediatric quality measures.
Measure use and reporting related requirements	By February 4, 2011, the Secretary will develop a standardized format for reporting information and procedures and approaches that encourage states to use the initial core measurement set to voluntarily report information on quality of pediatric programs. The Secretary will also disseminate information to states regarding best practices among states with respect to measuring and reporting on the quality of health care for children.
Demonstration projects	CHIPRA includes \$20 million annually for demonstration projects. DHHS will provide grants to up to 10 states and child health providers to use and test child health quality measures and to promote the use of health information technology for children. The law also includes a separate allocation of \$25 million for a childhood obesity demonstration project.
Development of a model electronic health record	The law requires DHHS by January 1, 2010, to establish a program to encourage the development of a model electronic health record format for children in Medicaid and CHIP.

Duration of Coverage Also Part of Quality Measurement

CHIP enrollment reports	The law requires states to include in their annual reports data to help assess enrollment and retention efforts, including data on continuity of coverage, denials of eligibility at both the application and renewal stages, and children's access to care. It also requires states to provide more timely Medicaid and CHIP enrollment data to the Secretary of DHHS and to include in their CHIP state plans a description of state activities to reduce administrative barriers to enrollment and renewals.
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*Adapted from Simpson L, Fairbrother G, Tuschner J, Jocelyn G. *Implementation Choices for the Children's Health Insurance Program Reauthorization Act of 2009*. New York, NY: Commonwealth Fund; 2009. CHIPRA = Children's Health Insurance Program Reauthorization Act; DHHS = Department of Health and Human Services; CHIP = Children's Health Insurance Program.

quality improvement; establish an interagency working group to advance quality efforts at the national level; develop a comprehensive repertoire of quality measures; formalize processes for quality measure selection, endorsement, data collection; and publicly report quality information through the work of a consensus-based organization. Although the strategic plan and priorities do not focus specifically on children, the legislation specifies that the priorities identified have the greatest potential for improving the health care for all populations, including children and vulnerable populations.⁶ The health reform legislation also includes provisions for quality measurement development and calls on the secretary to report on gaps where no quality measures exist and where existing quality measures need improvement, updating, or expansion, consistent with the national strategy. Thus, the provisions in health reform actually adopt a similar approach to measurement to those in CHIPRA. In fact, the exact language of the bill specifying the quality measurement program for adults in Medicaid states: “The Secretary shall identify and publish a recommended core set of adult health quality measures for Medicaid eligible adults in the same manner as the Secretary identifies and publishes a core set of child health quality measures.” Finally, 2 other provisions also hold potential for improving the quality of children’s health care: those related to the new Center for Medicare and Medicaid Innovation with \$10 billion over 10 years to test new models of care delivery, and the Medicaid and CHIP Payment and Access Commission charged with reporting and advising on payment, access, and quality under Medicaid and CHIP.

HEALTH INFORMATION TECHNOLOGY IN CHIPRA AND HITECH PROVISIONS OF ARRA

Health information technology includes not only electronic health records (EHRs), but also patient health records and health information exchanges. The \$19 billion investment in the HITECH provisions of ARRA to promote the meaningful use of EHRs by both hospital and ambulatory providers greatly enhances the potential of the smaller (\$5 million) CHIPRA investment. In addition to the funds provided as direct financial incentives to promote adoption, this legislation also establishes health information technology policy and standards committees and earmarks \$2 billion for DHHS to support adoption through grants, a national resource center, a network of regional resource centers, and an extension program. All of these have the potential to dramatically improve the use of EHRs by child health providers, if attention to child needs is assured in DHHS’s implementation of these new funds. It is important to note that the HITECH provisions in ARRA are actually surprising in their focus not just on technology, but also on improving health care quality and outcomes through the use of these technologies. Therefore, payments are not direct reimbursements for EHRs but instead are intended to serve as incentives to adopt and meaningfully use certified EHR technology. It is the “meaningful use” language, along with incentive payments, that focuses these

provisions on quality. By summer 2010, DHHS had awarded under the HITECH provisions: \$548 million to 56 states and territories to promote health information exchanges, \$642 million to 60 regional extension centers in 46 states, \$250 million to 17 beacon communities, and over \$80 million in workforce development grants.⁷

FINDINGS AND RECOMMENDATIONS FOR IMPLEMENTATION

CMS and AHRQ have moved swiftly to implement the CHIPRA provisions, including those on quality, despite gaps in leadership at CMS and the intense efforts on health reform. Key among these efforts was the establishment of a Subcommittee of the National Advisory Council for Healthcare Research and Quality (SNAC), whose role was as follows: provide guidance on criteria for identifying an initial core measurement set, provide guidance on a strategy for gathering additional measures, and review and apply criteria to a compilation of measures to begin selecting the initial core measurement set. SNAC’s work is described in the report that accompanied the publication of recommendations in the *Federal Register*.⁸ Final measures are listed in Table 2. At the same time, the Office of the National Coordinator, which was set up to implement the HITECH provisions, has awarded over \$50 billion in funds to states and organizations for promoting health information technology adoption and use and has promulgated criteria for meaningful use and the conditions under which providers and hospitals may receive incentive payments.⁹ Several findings and attendant recommendations emerged from interviews with experts and from our own analysis about implementation choices to date. These describe current problems and set forth steps needed to ensure that quality monitoring provisions under CHIPRA—and ultimately ACA and the HITECH provisions of ARRA—are implemented in a way that enables states to collect, report on, and use the data, as well as steps needed to create uniform reporting that will lead to a national picture of child health quality.

Our findings around problems and recommendations are grouped into 2 broad areas: those that deal with helping states report and use current measures (Table 2), and those that deal with expanding the current measures. Many of the recommendations require funding. It is crucially important to recognize that states will be seeking to develop capacity to monitor quality as called for in CHIPRA in the context of highly constrained state budgets. Economic conditions continued to worsen through 2010: state budget shortfalls are occurring as public coverage rolls are rising; thus, more funds are needed to serve the eligible uninsured. Indeed, as one expert commented, “fiscal issues are overwhelming all programmatic decisions.” Where possible, our recommendations indicate sources of funding for the states.

FOCUS EFFORTS ON REPORTING AND USE

Despite the fact that CHIPRA is a first in terms of quality provisions in federal statute, most states have engaged in

Table 2. Recommended Initial Core Measures for Children's Health Care Quality***Prevention and Health Promotion**

Prenatal/perinatal

- Frequency of ongoing prenatal care (NCQA measure)
- Timeliness of prenatal care (NCQA measure)
- Percentage of live births weighing <2500 g
- Cesarean rate for low-risk first birth women

Immunizations

- Childhood immunization status (NCQA measure)
- Adolescent immunization (NCQA revised for 2010)

Screening

- Body mass index documentation in 2–18-year-olds
- Rates of screening for delays using screening tools
- Chlamydia screening for women

Well-child care

- Well-child visits in the first 15 months of life
- Well-child visits in years 3 through 6 of life
- Well-child visits for 12–21 years of age—with PCP

Dental

- Total eligibles receiving preventative dental care

Management of Acute Conditions

- Pharyngitis—appropriate testing (NCQA measures)
- Otitis media effusion—avoidance of inappropriate use
- Total EPSDT eligibles who received dental treatment
- ED utilization—average 3 ED visits per member
- Pediatric catheter-associated bloodstream infection rates (PICU and NICU)

Management of Chronic Conditions

- Annual no. of asthma patients with ≥ 1 asthma ED visit
- Follow-up care for children prescribed ADHD medication
- Annual hemoglobin A1C testing

Family Experiences of Care

- CAHPS Health Plan Survey 4.0, Child Version

Availability of Services

- Children and adolescents access to PCP

*NCQA = National Committee for Quality Assurance; PCP = primary care physician; EPSDT = Early Periodic Screening, Diagnosis, and Treatment; ED = emergency department; PICU = pediatric intensive care unit; NICU = neonatal intensive care unit; CAHPS = Consumer Assessment of Healthcare Providers and Systems; ADHD = attention-deficit/hyperactivity disorder.

quality reporting for some time and many appear to be ready to push forward in the directions indicated by CHIPRA.¹⁰ However, state quality monitoring efforts are not uniform, need to be more rigorous, and do not capture the full range of services that children need. Implementing CHIPRA involves more than implementing specific provisions, but rather also involves new roles, relationships, and partnerships between DHHS and the states—roles that ideally should carry over into the implementation of health reform legislation. To ensure that CHIPRA achieves the full impact of its landmark provisions and to ensure these are preserved under ACA, actions at the federal and state levels are needed to build capacity for states to fully develop, sustain, and spread meaningful measurement, improvement, and accountability approaches. CHIPRA is an opportunity to recalibrate the partnership between states and DHHS, in particular CMS. Specific steps the federal agencies could take are outlined below.

HELP STATES BUILD A MEASUREMENT INFRASTRUCTURE

States will need strong capabilities to collect, store, and analyze data, including obtaining quality of care measures

from claims in the short term, and later from EHRs and health information exchanges—the latter as a source of data for quality measures, especially for topics such as coordination of care across settings.

Having sophisticated data warehousing and linking capabilities, as well as abilities to exchange data, are fundamental building blocks for quality measurement. Some states have this capability. For example, 10 or more states have all-payer claims databases, which they are using to answer question about cost and quality of care.¹¹ As another example, New York collects member-level data reported by Medicaid managed care plans (for all members) as part of annual Healthcare Effectiveness Data and Information Set (HEDIS) reporting and has created linkages of quality measurement results with eligibility files and Consumer Assessment of Healthcare Providers and Systems (CAHPS) surveys, as well as lead and immunization registries. Data sets such as these enable states to monitor care over time and across settings.

However, these states are the exception, not the rule. Such capability will be necessary for robust monitoring of quality. Although technical assistance to states will be critical to helping move this forward, actual additional investments of staff, hardware, and software by states and CMS will also be needed. Thus, CMS should expand its ability to provide technical support in the development of data infrastructure that will support quality measurement as well as directly fund states. The most appropriate mechanism for the latter might be expanding the types of state data investments that are eligible for an enhanced federal matching rate of 90%, rather than the usual 50% match for administration. (Medicaid reimburses expansions of health information technology programs at a rate of 90% to encourage use of certified EHRs and electronic exchange of health information.¹²)

PROVIDE SPECIFIC TECHNICAL ASSISTANCE AND SUPPORT TO STATES ON HOW TO COLLECT, REPORT, AND USE MEASURES

It will not be enough to simply provide measures. States will need more specifications and technical assistance to measure and report on all populations. Currently, states generally measure quality for managed care populations, usually through the HEDIS process, and to some extent for children under primary care case management. CHIPRA calls for measuring for all Medicaid and CHIP children, which would include those in fee-for-service Medicaid as well as managed care and primary care case management. Guidance will be needed on how to respectify measures for all populations, as noted by SNAC.⁸ For example, currently health plans report on children who have been in the plan continuously for a specified amount of time, which varies by the measure, but is generally at least 11 out of 12 months. Under CHIPRA, the continuous enrollment standard will shift to Medicaid and CHIP. This may mean that children would need to be in public coverage for the specified amount of time, but not necessarily in the same plan. Such a shift would signal that Medicaid/CHIP are the entities held responsible for quality improvement.

Moreover, guidance will be needed on how to report data. For example, should states report data separately by delivery system as listed above or combined? Or how should the various populations within Medicaid be reported (eg, should the seriously ill children in the aged, blind, and disabled category be reported separately from other children in Medicaid? Should children in managed care be reported separately from those in fee for service?). Well-thought-out guidance for reporting on Medicaid and CHIP children should form the foundation for guidance on reporting on all children under health reform.

However, even after all of these actions are taken, a number of states, if not most, will simply lack the capacity to actually collect, analyze, report on, or use the measures. In some ways, states' capacity to execute these responsibilities today are similar to those that states had in the early 1950s in epidemiology, when the Epidemiology Intelligence Service was established. CMS should partner with AHRQ to establish a Child Quality Corps that could train the workforce needed to meaningfully use measures and make these available to states on 1- or 2-year assignments. This adaptation of the Epidemiology Intelligence Service model was used in the 1980s when maternal and child health epidemiologists were made available to states and other public health agencies and organizations. An investment of \$15 million annually would be sufficient to establish a national program office, give recruitment and training support, and provide all 50 states with a trained quality manager capable of expanding (or initiating) state capacity.

Finally, and perhaps most significantly, assistance will also be needed to ensure that measures are not just reported on, but actually used to improve care within states and communities. A significant shortcoming of the CHIPRA legislation is that, apart from the demonstration program, it emphasizes measurement and reporting, not actual improvement of care or outcomes. The \$100 million demonstrations reach only 18 states—and many of them were the smaller states and did not encompass all Medicaid and CHIP children.¹³ At minimum, this means that states will need to ensure that relevant data get into the hands of entities that can bring about improvement—managed care plans, provider groups, communities, the public, and possibly providers themselves. Here, the ACA might be used to directly align and enhance CHIPRA efforts by ensuring that the \$10 billion available in innovation grants through CMS include child health improvement demonstrations.

ESTABLISH A NATIONAL OFFICE FOR QUALITY MONITORING TO SUPPORT THE STATES

Bringing about the quality improvements envisioned by CHIPRA and health reform legislation requires a sustained focus from DHHS. A national office for quality monitoring could be the focal point for guidance and technical assistance to the states and for developing policies for using the information to improve quality. This will require a significant investment in staff and resources nationally—similar to the investment made in the Medicare program over the

past few decades. Although specific dollar amounts are hard to identify for this support at the national level, the DHHS fiscal year 2010 budget proposal does specify in the ninth scope of work (from 2008–2011) that the budget for clinical improvement under the quality improvement organizations in Medicare is approximately \$400 million annually, which represents an investment of about \$9 for each of the 46 million Medicare beneficiaries.^{14,15} A similar level of investment for children covered through Medicaid (29 million children in 2007) and CHIP (4.9 million in 2009) would be \$102 million annually. This is clearly a significant increase over the current \$20 million per year under the CHIPRA demonstrations, but it is still a small number in terms of per-child investment. This national office could also design policies to encourage reporting by all 50 states and the District of Columbia once the funding and supports described above are in place. Achieving national reporting will be crucial because it provides comparative benchmarks and ensures the national accountability that CHIPRA seeks to create. Future legislation could consider making reporting of quality measures mandatory, just as reporting on CAHPS measures and on enrollment duration is mandatory. Absent a mandate for reporting, the support of a national office will be key.

THE DATA THAT SUPPORT THE CORE MEASURES, NOT JUST AGGREGATE DATA, SHOULD BE MADE AVAILABLE NATIONALLY

Reports from states aggregated at the state level, or even at the individual plan level, are of limited usefulness for policy makers and program managers in understanding where quality improvement efforts need to be targeted or for which populations. This recommendation would have Medicaid moving in the direction of Medicare, where data are reported by organizations (eg, hospitals, nursing homes). Data could be put into a national data structure, such as the Healthcare Cost and Utilization Project (HCUP) which is a family of data sets sponsored by Agency for Healthcare Research and Quality, the CAHPS Benchmarking Database, or even CMS sites such as Nursing Home Compare, to create a “Child Health Compare,” comprising the various components of the data set (eg, hospital data, CAHPS), where queries or specific prepackaged state reports could be run. Thus, the information would be available broadly for state programs and policy makers and deidentified data could be made available for researchers. The current HCUP budget for data is just under \$2 million annually, but possibly less would be needed for the proposed approach because the volume of data would be only the data linked to the core measures.

LAUNCH A SPECIFIC INITIATIVE TO ENSURE A FOCUS ON CHILD HEALTH IN ALL OF THE HITECH AND ACA INITIATIVES

DHHS has the opportunity to ensure that child health providers in all settings (eg, physician offices, hospitals, schools, day care facilities) and the needs of children are systematically addressed by the numerous newly funded

programs and state efforts under HITECH. The meaningful use provisions for Medicaid providers (ie, those relevant to children's health care) afford considerable implementation flexibility to the states, and that is likely to lead to substantial variation in the degree to which states are including the needs of children and child health providers and systems in their implementation decisions. The Office of the National Coordinator, in collaboration with CMS and AHRQ, could establish a specific initiative or focus across all the HITECH programs and grants to oversee and coordinate child-specific components and ensure specific outreach and inclusion of child health issues and stake holders. Specific examples of areas needing attention include the degree to which pediatric primary care providers are opting into the EHR incentive program and increasing the number of pediatric measures that support meaningful use. Also needing attention is ensuring that national and regional extension centers—which were set up in the HITECH provisions to offer technical assistance, guidance, and information on best practices to support health care providers' efforts to become meaningful users of EHRs—are including child health providers in their technical assistance efforts and building capacity in the national regional extension center program to support and spread tools, resources, and best practices to all regional extension centers.

EXTEND WHAT IS BEING MEASURED

CONTINUE THE EMPHASIS ON INSURANCE STABILITY AS AN INTEGRAL ASPECT OF QUALITY

Stable enrollment in the Medicaid and CHIP programs is an essential first step to ensuring that children have access to care and to maintaining a focus on quality. Significantly, although reporting on the core measurement set is voluntary, states are mandated to report on the duration of coverage and on various access dimensions using CAHPS. In this regard, too, the legislation is a landmark and departure from the past: for the first time, coverage duration, or stability, is viewed as an aspect of quality. This relationship is supported by a body of evidence showing that improved outcomes occur when children are stably enrolled.^{16,17} Most uninsured children are eligible for programs but are not enrolled, and still other reports show high levels of churning—that is, moving on and off the program.^{17–20}

Also strengthening this relationship, the legislation includes a number of provisions to improve the enrollment and retention of eligible children in addition to measurement, including outreach grants to states, bonuses for states for improved enrollment, and several provisions to simplify enrollment and renewal to reduce churning.³ The initial set of core measures did not include a measure of stability, although this was discussed in planning.²¹ It will be important to develop measures of stability of coverage, to continue the focus on stability as an aspect of quality, and to ensure that this provision be seen as strongly linked to the core measures. There are several approaches that could be used to do this, including the following: prospective and retrospective duration measures (following a cohort of new

enrollees forward through renewal, or looking backward at enrollment patterns of a cohort); continuity ratios and average duration measures (proportion of months enrolled over all months in the year); retention and disenrollment rates; and churning rates and turnover in a given year (percentage of children enrolling and percentage dropping out in a given year).²¹ Each of these approaches has pros and cons that will require investigation.

Finally, the need to focus on stability is only increased by the ACA and the creation of whole new entities of health insurance exchanges that will provide coverage to some children as soon as they are created, and potentially many more in 2019 when CHIPRA is scheduled to expire.

ENSURE THAT DISPARITIES CAN BE MEASURED AND MONITORED IN THE QUALITY MEASURES

As with adults, disparities in health status and health care are pervasive for children, with important and often lifelong consequences.^{22,23} Disparities exist on the basis of race, ethnicity, primary language, special needs, and geography.^{24–27} Currently, data do not exist to measure disparities in many of the data sets. Application forms for Medicaid and CHIP are a primary source of information on race, ethnicity, and primary language of the child or family. Yet these data are collected in various nonstandard ways by the states, making creating a national picture of disparities difficult or impossible (author review of application forms in all states, 2010). Further, race/ethnicity is missing in over a quarter of the hospital discharges for children (internal analysis using 2006 Kids' Inpatient Database). It is not clear how these key variables are collected in the various EHRs or how complete the data are. Implementation of CHIPRA is an opportunity to develop an explicit and standardized strategy for collecting race, ethnicity, and language information for all children that cuts across all the measures, and to align these efforts with work undertaken in ACA and HITECH. This will then be a platform for monitoring disparities. This rationalizing of data collection needs to be followed by an explicit strategy to ensure that states and the federal government have the information needed to address disparities. Measurement of disparities was stressed in AHRQ's call for new measure development and in the demonstration projects.^{2,13} However, more may be needed at the point of collection to ensure standardized collection of race, ethnicity, and language data.

BUILD MEASURES THAT FOCUS ON SYSTEM ACCOUNTABILITY AND HEALTH OUTCOMES

The initial core set of measures needed to rely largely on what states were already doing, as explained in the background paper accompanying the publication of the recommended measures in the *Federal Register*.⁸ However, updates to the measures will not be similarly constrained. Measures will be updated annually during the period of the CHIPRA legislation, offering an opportunity to move into new measures and new topic areas. SNAC noted the particular need for additional measures in specialty care,

inpatient care, substance abuse care, and mental health treatment, as well as measures of coordination of care, health outcomes, and measures of the medical home.⁸ A number of policy bodies and researchers have also identified gaps in the measures, and an Institute of Medicine committee is issuing a report summarizing the gaps and recommending areas for measure development.^{13,28–32} Our intent is not to duplicate a list of gaps in specific measures but rather to point to new overall directions and capabilities. In the future, for example, if states have the enhanced capabilities recommended above to collect, warehouse, link, and report on administrative and health data, then new possibilities will be opened for monitoring health care. Furthermore, data will be increasingly available in an electronic format, allowing for reporting on outcomes as well as processes.

The fact that data will be available longitudinally in both cases means that measures can look across time to determine whether all appropriate aspects of care were delivered. New measures could take advantage of the new capabilities by addressing, for example, whether appropriate care was provided after a hospitalization (not merely whether there was a visit), whether all aspects of asthma care were delivered, or whether an appropriate combination of drugs was prescribed for a given mental illness. This capability will enable greater reliance on composite measures. These composite measures are important because appropriate care, particularly for chronic conditions, involves more than one service or care at one visit. Thus, these all-or-none composite measures are needed to raise the bar on performance.³³

In addition, broader measures of care are needed, such as one that the National Committee for Quality Assurance is developing to measure not just whether a well-child visit has taken place, but rather whether all recommended services have been delivered by the time the child reaches a specified age.³² Finally, measures need to be adaptable to changes in organization and delivery of health care. The emphasis in ACA on system accountability and the need to ensure adequate value for the expenditures in health care illustrates this point. CHIPRA's requirement for measures of "most integrated health care settings" and the recommended measure of family experiences of care could be considered system accountability measures, but more will be needed.⁸ The push for accountable care organizations and a specific state demonstration initiative for a pediatric accountable care organization will require some concerted research and testing to determine the best measures to use in such a financial incentive model.

CONCLUSIONS: BEYOND CHIPRA

The progress that is made on quality measurement and monitoring over the next 4 years through CHIPRA will serve as the foundation for future efforts across both public and private sectors. It has already informed the framework for measurement for adults in Medicaid under ACA and should continue to inform all measurement related investments in the coming year, so as to ensure that the progress

that CHIPRA supports is not diluted or overtaken by broader reform efforts. For this to occur, however, much more attention is needed to ensure that states have sufficient measurement infrastructure and funding to support quality monitoring and management and that the federal government has the capacity to support and guide quality measurement and improvement efforts. The recent enactment of major health reform has brought the goal of coverage for all children within reach. Building on and extending the base established by CHIPRA will help inform the quality management of a dramatically restructured system of care.

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