

How Health Policy Influences Quality of Care in Pediatrics

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KEYWORDS

- Policy • Quality • Medicaid • CHIP
- Improvement • Measurement

The primary focus of child health policy for the last twenty years has been to improve access to care for children, either through expansions of public coverage through medicaid or State Child Health Insurance Program (SCHIP) or through the funding of direct service programs, such as community health centers; however, two trends are broadening this historical emphasis. First, the growing recognition that the health of children, and ultimately the health of the adults that they will become, depends much more on factors outside the clinical domain.¹ Social determinants and the pervasive inequities that exist in the United States are driving outcomes as varied as birth outcomes, obesity, asthma morbidity, and children's ability to enter school ready to learn or leave school ready to work.² The second trend is the increasing focus on the value of health care as health care costs have continued to grow.³

Although having health insurance coverage continues to be a first order priority, the policy dialog has become richer by now asking about: to what does the coverage provides access; what the effectiveness and quality of those services are; and the outcomes they produce. This article reviews the important domains of health policy relevant to quality; highlights important trends which have altered the policy landscape over the last decade; and ends by focusing on the Child Health Insurance Program Reauthorization Act (CHIPRA) of 2009, the most important policy investment in quality of care for children in the history of public financing for children's health care.⁴

WHY WORRY ABOUT QUALITY OF CARE IN PEDIATRICS?

As the preceding articles in this volume have made clear, far too often children and adolescents fail to receive care that is of high quality or consistent with clinical

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recommendations and many opportunities exist to improve the quality of health care for children and adolescents (see [Table 1](#)).^{5,6} Although poor quality care is widespread in the United States and internationally, and although poor quality care affects all dimensions of care, including preventive, acute, chronic and rehabilitative services, the burden of poor quality falls disproportionately on certain populations of children. These disparities have been well documented across types of insurance (public versus private), family income groups (low income versus higher income), race/ethnicity, and primary language spoken at home.⁷⁻⁹ Public policy has a responsibility to address these particularly vulnerable groups as was so eloquently stated by Hubert Humphrey “[...] the moral test of Government is how that Government treats those who are in the dawn of life, the children; those who are in the twilight of life, the elderly; and those who are in the shadows of life, the sick, the needy and the handicapped.”

THE SCOPE OF HEALTH POLICY IN CHILD HEALTH

When health professionals think about health policy, they tend to think primarily of programs that either pay for care (eg, Medicaid or SHIP) or deliver health care services (eg, community health centers). However, many other sectors of policy have an impact on children's lives and their health. In fact, children and their health are disproportionately affected by public policy due in large part to the fact that a large proportion of children live in low income families and they are therefore eligible for publicly funded programs, which are largely means tested. Children are also the beneficiaries of one universal public program, ie, public education, and observers are increasingly realizing the impact of the educational setting on children's health and well-being. Most notably, the childhood obesity epidemic has raised policy-maker awareness at the national and state levels about the importance of focusing on the environments in which children “live, learn and play” and how those environments can prove toxic to healthy choices and lifestyles.¹⁰ Thus, the scope of health policy goes well beyond the financing and delivery of health care services and includes such issues as the foods that can be purchased from food stamps, what food options school provide children, and the presence of walking paths and bike trails in children's neighborhoods.

THE SCOPE OF HEALTH POLICY AND THE QUALITY OF CHILDREN'S HEALTH CARE

Turning from broad policy domains affecting children's health to the quality of health care provided to children and families, the choices made in health policy at the federal and state levels can significantly improve or impede society's ability to move toward improved quality. Combined, Medicaid and SCHIP programs finance care for an estimated 30 million children.¹¹ This number is equivalent to nearly one of three of America's nearly 73 million children ages 0 to 17 years and up to 40 percent of all children under age 6 years in many states. As dominant payers for children's health services, SCHIP and Medicaid play powerful roles in shaping the health care market as well as health care organizations, such as children's hospitals.¹² At the same time, the majority of children's health care is provided in private offices, clinics, and hospitals that accept both public and private payers.¹³ Strategies to improve quality for publicly insured children have been shown to also improve the quality of care for privately insured children.^{14,15}

In 2000, Eisenberg and Power articulated the challenges to achieving high quality care as a series of “voltage drops” reducing patients' opportunities to receive the care they need.¹⁶ This framework was used by Chung and Schuster in 2004 to examine how these barriers affect children's health care.¹⁷ This framework is further

adapted here to reflect the growing understanding of the steps needed to achieve high quality (**Fig. 1**). This graphic clearly indicates that for children to be able to have even the opportunity for high quality care, they must first have access to health insurance, have that insurance cover a comprehensive range of benefits and providers, have access to a medical home and an appropriate set of services in the community, and have providers equipped with evidence and a capacity to continually measure and improve the quality of care they are providing.

At the same time, this cascade of steps occurs within a larger health system, the features of which are also shaped by health policy decisions. In 2006, the Commission on a High Performance Health System identified four characteristics of a high performing system: (1) high quality, safe care; (2) access to care for all people; (3) efficient, high value care; and (4) system capacity to improve.¹⁸ For children and families, two additional features are critical: the integration of services across type, setting, and time; and the partnerships between funders, systems, families, and providers.¹⁹ Health policies can directly promote these features by requiring or promoting certain activities on the part of private health plans, states, and providers.²⁰ Ultimately, the result of high performance at the program and system levels is the provision of health care to children and youth that is safe, effective, child- and family-centered, timely, efficient, and equitable, and that results in improved child health and development.

Health Insurance Coverage (Voltage Drops One and Two)

In 2005, the majority (60%) of children were still covered through their parents' employment,⁹ 28% were covered by Medicaid or CHIP, and of the over 8 million uninsured, fully two-thirds were eligible for public coverage.²¹ The current economic crisis is likely to change this picture resulting in many children losing private coverage, either because their parents lose their employment or their parents' employers stop providing coverage, or transfer the costs to the parents, making it unaffordable for many.²² Numerous studies have shown that children who have a stable source of insurance are more likely to have a usual source of care, well-child visits, and preventive care and consequently have fewer unmet medical and medication needs and experience fewer delays in care.^{23,24} In addition, recent publications have summarized the large volume of evidence on the impact of the SCHIP program.^{25–27} The successes include: enrolling the target population and reducing the rate of uninsured children; increasing access to and use of care; giving parents peace of mind about their children's health care; and reducing racial/ethnic disparities in health care coverage.

More recently, policymakers are recognizing that retention of children in their insurance program is almost as great a challenge, particularly for SCHIP and Medicaid, and it is increasingly recognized as crucial for quality care.^{28–30} Lack of stable coverage, even if there are only short spells without insurance, adversely affects families' access to and use of services and leads to delays in care and unmet needs.³¹ Continuously insured children are less likely to use high-cost emergency medical services or to be hospitalized for such conditions as asthma.³²

Appropriate Covered Benefits and Providers (Voltage Drop Three)

Once children have insurance coverage and remain stably enrolled, it is essential that the insurance benefit packages provide access to appropriate services and a stable provider network, including both primary and specialty care providers, so that the covered benefits are actually delivered. However, many health plans in the private sector model their benefit package on an adult model of care that is not appropriate for children.³³ This difference was recognized over 40 years ago when the "Early and Periodic Screening, Diagnosis, and Treatment" (EPSDT) program was

Table 1
Quality of Care for Children and Adolescents in the United States: A National Snapshot

	Nationwide Estimate of Population	% Nationwide (95% CI)
Physical and Dental Health		
Indicator 1.1: Children ages 0–17 yrs whose overall health status is excellent or very good	61,141,289	84.1 (83.6–84.5)
Indicator 1.2: Children ages 1–17 yrs whose teeth are in excellent or very good condition overall	46,829,724	68.5 (67.9–69.0)
Indicator 1.4: Children ages 0–17 yrs who are overweight based on Body Mass Index-for-age	4,607,912	14.8 (14.2–15.4)
Indicator 1.6: Children ages 6–17 yrs who missed 11 or more days of school because of illness or injury in the past 12 mos	2,486,464	5.2 (4.9–5.5)
Indicator 1.7: Young children ages 0–5 yrs who have had injuries requiring medical attention during the past 12 mos	2,237,344	9.4 (8.9–9.9)
Indicator 1.9: Children ages 0–17 yrs who currently have health conditions described as moderate or severe by their parents	5,721,482	7.9 (7.6–8.2)
Indicator 1.10: Children ages 0–17 yrs who experienced one or more asthma-related health issues during the past 12 mos	5,841,485	8.1 (7.8–8.4)
Indicator 1.12: Children ages 0–17 yrs who were hospitalized for asthma during past 12 mos (national level data only)	374,282	0.5 (0.4–0.6)
Emotional and Mental Health		
Indicator 2.2: Young children ages 0–5 yrs with moderate or higher risk for developmental, behavioral, or social delay	4,913,967	24.5 (23.6–25.4)
Indicator 2.6: Children ages 6–17 yrs who often exhibit problematic behaviors	3,814,253	7.8 (7.4–8.2)
Indicator 2.7: Children ages 2–17 yrs who have ADD or ADHD and currently take medication for it	2,475,667	3.8 (3.6–4.0)
Indicator 2.8: Children ages 0–17 yrs who have been told by a doctor or health professional that they have autism (national level data only)	332,294	0.5 (0.4–0.5)
Health Insurance Coverage		
Indicator 3.1: Children ages 0–17 yrs who have health care insurance	66,217,390	91.2 (90.9–91.6)
Indicator 3.2: Children ages 0–17 yrs who have had consistent health care coverage during the past 12 months	61,646,174	85.1 (84.6–85.5)
Indicator 3.3: Children ages 0–17 yrs who are currently covered by publicly funded health insurance	19,940,300	27.7 (27.2–28.2)
Health Care Access and Quality		
Indicator 4.1: Children ages 0–17 yrs who had one or more preventive medical visits during the past 12 months	55,995,030	77.8 (77.3–78.2)
Indicator 4.2: Children ages 1–17 yrs who received all needed preventive dental care during the past 12 mos (children who needed preventive dental care)	47,616,245	92.9 (92.5–93.2)

Indicator 4.3: Children ages 0–17 yrs who received both medical and dental preventive care visits during the past 12 mos	41,975,020	58.8 (58.2–59.3)
Indicator 4.4: Children ages 0–17 yrs who went to a hospital emergency room about their health two or more times during the past 12 months	4,133,147	5.7 (5.5 - 6.0)
Indicator 4.5: Children ages 1–17 yrs who received needed mental health care or counseling during the past 12 mos (children who needed mental health care)	2,712,215	58.7 (56.5–61.0)
Indicator 4.6: Children ages 0–17 yrs who received all needed medical care during the past 12 mos	61,412,687	98.5 (98.3–98.7)
Indicator 4.7: Children ages 0–17 yrs who received all needed prescription medicine during the past 12 mos (children who needed prescription medication)	43,675,766	98.8 (98.6–98.9)
Indicator 4.8: Children ages 0–17 yrs who receive health care that meets the American Academy of Pediatrics definition of Medical Home	33,118,954	46.1 (45.6–46.7)
Indicator 4.9: Children ages 0–17 yrs who have personal doctor or nurse (PDN), a health professional who is familiar with the child and the child's health history	60,397,981	83.3 (82.9–83.8)
Indicator 4.10: Children ages 0–17 yrs who have a personal doctor or nurse (PDN) who communicates well and spends enough time with them	47,442,122	65.6 (65.0–66.1)
Indicator 4.11: Children who consistently get needed care quickly from their personal doctor or nurse (PDN) during the past 12 mos (ages 0–17 yrs who have a PDN and needed phone advice and/or urgent care)	29,192,058	91.7 (91.2–92.1)
Indicator 4.12: Children who had problems getting specialty care or services recommended by their personal doctor or nurse (PDN) during the past 12 mos (ages 0–17 yrs who have a PDN and needed specialty care, services, or equipment)	2,561,525	15.5 (14.7–16.3)
Indicator 4.13: Children whose personal doctor or nurse (PDN) follows ups with the family after the child receives specialty care or services (ages 0-17 yrs who have a PDN and needed specialty care, services, or equipment)	9,398,838	57.8 (56.7–58.8)
Indicator 4.14: Young children ages 0–5 yrs whose parents were asked by a doctor or other professional about concerns they may have about the child's learning, development, or behavior during the past 12 mos	8,863,726	37.6 (36.7–38.5)
Indicator 4.15: Young children ages 0–5 yrs whose parents got information to address their concerns about the child's learning, development, or behavior, from a doctor or health professional in the past 12 mos (children whose parents are highly concerned)	1,310,727	43.3 (40.6–45.9)

Note: Shaded estimates do not meet the National Center for Health Statistics standard for reliability or precision. The relative standard error is greater than 30%.

Adapted from CAHMI/Data Resource Center, 2003 National Survey of Children's Health; (www.childhealthdata.org).

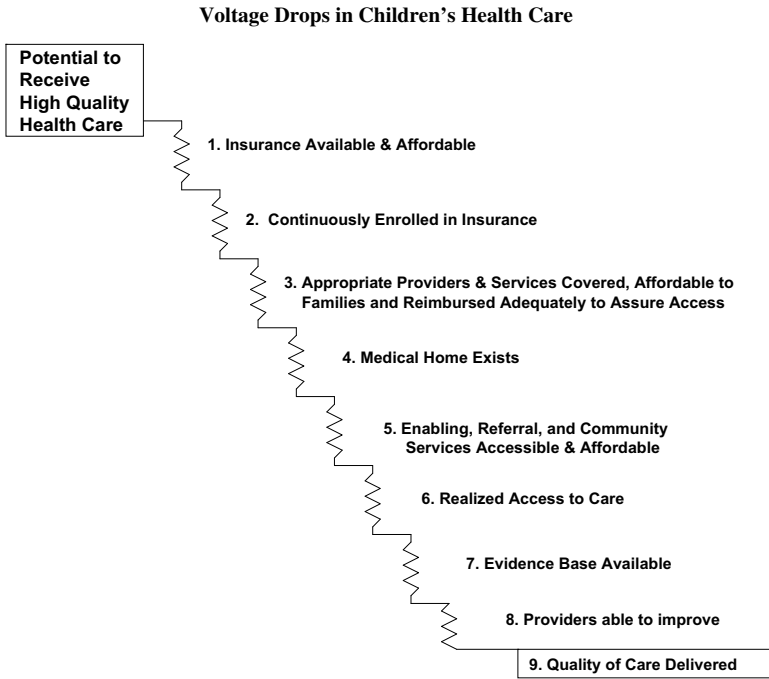


Fig. 1. Voltage drops in children's health care. (*Adapted from Eisenberg JM, Power EJ. Transforming insurance coverage into quality health care: voltage drops from potential to delivered quality. JAMA 2000;284(16):2100–7; with permission.*)

established within Medicaid.³⁴ Covered services should also promote the development of optimal physical and mental health and social functioning into adulthood.

Several of the benefits guaranteed to Medicaid children through EPSDT are optional under SCHIP, putting those children at risk of not receiving them.³⁴ Commercial insurance benefit design has become the standard in SCHIP, in effect applying an adult standard to children and hence removing key features essential to addressing the unique health needs of children.³⁵ Another recent issue is coverage for obesity-related services. Although coverage is becoming more common for adult care, there is substantial variation among public and private sector health plans as to what, if any, obesity-related services will be covered for children.³⁶

In addition to stable insurance and a robust benefit package, there need to be sufficient providers to deliver a full range of preventive and primary care services, as well as dental and mental health services and pediatric specialty care. However, access to these services varies substantially by the child's sociodemographic characteristics.⁷ In most states, Medicaid reimbursement rates remain substantially lower than the market rate.³⁷ The combination of low reimbursement rates, paperwork requirements, and the increased number of capitated patients deters many private physicians from accepting Medicaid and SCHIP children as patients, or have them accepting only a few.³⁸

Realized Access to Comprehensive, Coordinated Services (Voltage Drops Four, Five and Six)

After children have achieved "realized" access to care, children need to receive care that serves the full range of their needs and that is coordinated across providers and

community organizations. In 2003, only 46% of children ages 0–17 years received health care that met the American Academy of Pediatrics definition of a medical home (see **Table 1**). A medical home is an approach to providing high-quality, cost-effective health care in which the primary care physician works in partnership with the family, other health care providers, and community to ensure health care is accessible, family-centered, continuous, comprehensive, coordinated, compassionate, and culturally effective.³⁹ Historically, a medical home has been determined simply by the presence of a usual or primary source of care, such as a pediatrician or family physician. However, thanks to national surveys, it is now possible to operationalize this concept more fully and reflect more of the dimensions of medical home through measurement.⁴⁰

Several key aspects of realized access and medical home can be influenced by public policy. For example, the simple act of obtaining and maintaining health insurance is associated with realized access and improve quality of life.⁴¹ For limited English-language proficient parents, the availability of interpreters is crucial if safe, family-centered care is to be provided.^{42,43} However, only a handful of states have set up programs to provide direct Medicaid/SCHIP reimbursement for language services.⁴⁴ Similarly, care coordination is critical for children with special health care needs, but the availability of these services varies by insurance type.^{45,46} Together, these features determine whether children have a medical home that provides continuous primary and preventive health services, as well as health services for illnesses and injuries.

Evidence Base Available (Voltage Drop Seven)

The provision of evidence-based, effective care is a central component of high quality care. However, it is well recognized that the evidence base for pediatric services is lacking in many ways.^{47,48} This problem is the end result of longstanding challenges with the appropriate inclusion of children in research, as well as the lack of pharmaceutical company attention to conducting studies in children.⁴⁹ In addition, an examination of research funding at the National Institutes of Health between fiscal year 1998 to fiscal year 2003 revealed that, although overall pediatric research increased, its proportion of total NIH spending went down.⁵⁰

Thus, pediatric advocates have worked hard over recent years to increase funding for pediatric research. These efforts have led to several policy changes to support the evidence base in pediatrics, including the creation of the Pediatric Research Initiative in 2000, the Better Pharmaceutical for Children Act and Pediatric Research Equity Act of 2007, and the funding of the National Children's Study, a 20-year, longitudinal cohort study of 100,000 children. More recently, the American Recovery and Reinvestment Act of 2009 (ARRA, also called the "stimulus bill") included \$1.1 billion for comparative effectiveness research, which is also a critical dimension of what evidence is missing for improving the quality of care. However, another aspect of the evidence needed to improve quality is evidence about the improvement approaches themselves.^{51–54} Funding for this type of research is most lacking.

Capacity to Improve (Voltage Drop Eight)

Over the last decade, significant efforts have been made to help practitioners, organizations, and systems of care improve the quality and safety of care for various populations, including children and adolescents. Notably, the National Initiative for Children's Healthcare Quality is reaching its tenth anniversary and continues to work with practices, states, and health plans to improve care.⁵⁵ The American Academy of Pediatrics has had a steering committee on quality improvement and

management since 2001. In addition, dozens, if not hundreds, of studies have been published reporting on various efforts to improve quality of care. However, many of these are single-site, one-time efforts that require significant time and effort on the part of participating practices. Although organizations such as hospitals and integrated systems are able to establish an ongoing program dedicated to improving quality, most physician practices can not do so. This situation has led to the recognition that another strategy is needed to assist practitioners. One possible model is an “improvement partnership” within a state or region. The longest standing improvement partnership is the Vermont Child Health Improvement Program (VCHIP), which has been successful in measurably improving care in many areas, including immunizations, perinatal care, and care provision in foster care.¹⁴

THE FUTURE IMPACT OF POLICY ON QUALITY

The first bill signed into law by President Obama, the Child Health Program Reauthorization Act of 2009, includes a number of provisions that will address most – if not all – of the voltage drops described above. In addition to providing funding for health coverage for over four million more children, it also includes the most significant federal investment in pediatric quality to date. Historically, many state Medicaid programs have had longstanding quality initiatives in place and all states are required by federal law to address performance measurement and quality in a variety of ways. These efforts have been limited by substantial variation across states, which have hampered the ability to understand which populations are experiencing quality challenges or which approaches are proving effective at improving quality. For example, no common quality measure was consistently available from all 50 SCHIP programs in 2006.⁵⁶

These limitations were the impetus for a group of individuals and organizations to collectively educate Congress on what is needed. As a result, policymaker understanding of the gaps in quality for all, as well as for children in particular, has grown in the years preceding the bill's signing. The result is that the CHIPRA legislation contains detailed provisions related to quality of care and funding of \$225 million over 5 years, specifically to address pediatric quality and outcomes. These provisions cover investments in quality measurement, demonstrations on strategies to improve quality for children, health information technology (HIT), and accountability. They are summarized briefly here, and the article about HIT also provides some information about some additional relevant policy changes through the ARRA. Policymakers defined quality beyond technical, clinical quality and included the quality of the Medicaid program and the quality and stability of the insurance coverage as part of the legislation's framework.

Quality Measurement

Quality measurement is a prerequisite to any improvements in quality.⁵⁷ The field of quality measurement and improvement has matured significantly since 1997, when SCHIP was first created. Modest investments in research, innovation, and improvement in child health care have produced numerous quality measures and some effective improvement strategies.^{54,58} However, many gaps remain in the quality measures available and the scope, effectiveness and reach of improvement efforts.^{59,60} The CHIPRA bill has three main provisions related to quality measures: (1) the development of a core set of quality measures for state reporting; (2) a quality measures development program; and (3) demonstrations on using the quality measures. The core measure set must include measures related to the quality of the insurance coverage,

the availability of a full range of services, and a full range of quality domains, including effectiveness, family experiences of care, and disparities. The quality measures development program was included in response to the need for new measures and should go a long way toward expanding the available set of validated, evidence based measures. The demonstrations are for using the new measures. The development of the core measure set and the new measures development program must be done in consultation with a broad array of stakeholders, including pediatric providers and experts in quality measurement. These provisions are a major step forward; however, Congress stopped short of requiring states to report using these measures. Consequently, it remains to be seen how many will be actually used.

Demonstrations

The ability to improve the quality of care for children and youth has grown in the last 5 years. However, much remains unclear as to the effectiveness and relative effectiveness of various improvement approaches. The CHIPRA legislation recognizes this and allocates \$100 million over 5 years to demonstrations that are focused in the following areas: (1) adoption and use of new pediatric measures (see above); (2) the role of HIT in improving care; (3) provider delivery models that improve care, especially for children with chronic illnesses; and (4) use of a model pediatric electronic health record.

Health Information Technology

HIT is a key tool for improving the quality and efficiency of care. HIT includes: electronic health records, personal health records, use of personal digital assistants, health information exchange, computerized order entry systems, e-prescribing, and disease-specific or population-based registries.⁶¹ Policy efforts on HIT to-date have historically ignored child health needs, despite the fact that children, and child health providers, have unique issues when it comes to HIT. Here again, the child health community has dedicated significant energy and time over the last 5 years to raising the profile of the needs of children to policymaker attention through such efforts as the AAP's Council on Information Technology. The CHIPRA legislation dedicates \$5 million to the development of a model pediatric electronic health record.

In addition, the ARRA provides \$19 billion for health information technology, an investment that many call a "game changer" in the adoption of electronic health records.⁶² The majority of these funds go to funding incentives through Medicare and Medicaid for hospitals and physicians, including pediatricians, to adopt certified electronic health records.⁶³ Physicians are eligible for the Medicaid incentives if at least 30 percent of their patient load is covered by Medicaid. This requirement means that physicians may receive a maximum Medicaid payment of \$75,000 over 6 years. Pediatricians with a Medicaid caseload of 20 percent are eligible for incentive payments, but their total payment is limited to two-thirds of what they would otherwise receive. The stimulus bill also establishes several programs to train health professionals in health informatics and to provide technical assistance to providers to implement HIT.

Accountability

The final aspect of the CHIPRA legislation that is likely to be instrumental in shaping Medicaid and SCHIP policy in the coming years is the focus on transparency and accountability. States continue to be required to report on performance, including quality performance, and the secretary of US Department of Health and Human Services (HHS) can design incentives to promote the use of the core measure set. In addition, the HHS secretary must report to Congress on the quality of care provided

to children through these two programs. Finally, the legislation establishes for the first time a national Medicaid and CHIP Access and Payment Advisory Committee (MAC-PAC). This independent committee will have representation from pediatric providers and is charged with examining and reporting to Congress on the degree to which the Medicaid and CHIP programs are assuring access to care and quality of care.

SUMMARY

The next 5 years are likely to see dramatic changes in the way pediatric care is delivered, changes which hopefully will result in significant improvements in the safety and quality of care for children and adolescents. The significant infusion of funds through CHIPRA and ARRA will enable states to launch new programs to both expand access and improve quality. The explicit emphasis in CHIPRA on quality measurement, demonstrations of improvement efforts, HIT, and accountability together will work to shape deployment of these and other health care funds to enhance quality.

In addition, the emphasis on quality measurement and quality improvement in the current legislation is likely to inform the larger health reform initiatives and likely to get underway, aimed at dramatically enhancing health care coverage opportunities, containing costs and increasing value in health care. Thus, the policy framework to improve quality expressed through CHIPRA may be the underpinnings of a larger framework to improve quality in children's health care in health reform. Pediatricians at the local, state and national levels have an opportunity to be involved in this change to ensure the best possible implementation. Pediatricians and other health professionals have been, and will continue to be, active in shaping the policy dialog and through education, research and advocacy working to improve children's health care.

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