

Report

**Improving Child Health
Through State-Based
Partnerships:**
A Profile of Three Programs

by Sarah Klein

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Acknowledgements

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Abstract

Child health improvement partnerships, which enable providers, payers, and clinicians to collaborate on quality improvement initiatives, have proven to be an effective means of increasing children’s access to high-quality, evidence-based care. In more than 15 states, these partnerships have helped public and private sector leaders create a shared vision for addressing pressing children’s health needs—including access to mental health services and consistent delivery of preventive health care—and achieve them by changing health policy and equipping clinicians with the knowledge, tools, and financial support to redesign their practices. As the following profiles of improvement partnerships in Utah, Vermont, and Washington, D.C., illustrate, such collaborations create opportunities for collaborative learning, provide education on quality improvement and measurement techniques, and engage policymakers and payers in efforts that may be increasingly important as more children gain health care coverage through provisions in the Children’s Health Insurance Program Reauthorization Act and the Affordable Care Act.

Introduction

Less than half of U.S. children receive health care services indicated by professional standards of care—a problem many experts attribute to wide variations in care and poor adherence to evidence-based guidelines¹. Years, if not decades, often lapse between the issue of a national recommendation for care and its implementation, in part because clinicians lack the time, training, and support necessary to modify their practice patterns to achieve high-quality, evidence-based, and cost-efficient care.

To address this problem, policymakers have placed an emphasis on the measurement and reporting of quality indicators for children. The Child Health Insurance Program Reauthorization Act of 2009 (CHIPRA) calls for the development of core child health quality measures, assistance to states in adopting such measures, and a program to monitor child health quality. CHIPRA also provides funding for state-based demonstration projects that test and use new quality measures. Such attention to provider performance is only expected to increase as accountable care organizations and Medicaid agencies begin to measure and demand higher performance from clinicians in exchange for payment.

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While these policies and programs will advance the field of quality measurement, they do little to address one of the underlying causes of poor-quality care: a lack of training and support for providers to engage in quality improvement activities. To remedy this, several states have established innovative public-private partnerships that are designed to build local capacity for performance improvement. The partnerships serve as coordinating bodies, bringing together state Medicaid agencies, health plans, public health departments, physicians (as well as their respective medical societies), hospitals, and academic medical centers to develop both a unified vision for regional quality improvement and concrete strategies for achieving it.

¹ R. Mangione-Smith, A. H. DeCristofaro, C.M. Setodji et al., “The Quality of Ambulatory Care Delivered to Children in the United States,” *New England Journal of Medicine*, Oct. 2007 357(15):1515-23.

Three Models

This issue brief provides profiles of three such partnerships, which use different financing models and have different areas of focus.

- The first and most advanced of these partnerships is the **Vermont Child Health Improvement Program (VCHIP)**. With a budget of \$8.64 million that is financed by the state's Medicaid agency, commercial insurers, and private foundations, VCHIP provides physicians with best-practice guidelines, performance improvement tools, and hands-on training to help them measure and report progress on various quality improvement initiatives. VCHIP also makes ample use of collaborative learning environments to allow clinicians to brainstorm solutions to the challenges they face.
- In similar fashion, the **Utah Pediatric Partnership to Improve Healthcare Quality (UPIQ)** has used learning collaboratives to help clinicians increase preventive services and screening for developmental delays, while also managing common conditions such as asthma, attention deficit and hyperactivity disorder, and childhood obesity. The Utah collaborative typically bring together dedicated practice teams, composed of physicians, nurses (or medical assistants), office managers, and parents for daylong learning sessions, and supplements these with monthly conference calls. UPIQ also provides physicians with access to a Web portal with detailed information on best practices for caring for children special needs and preventing and/or treating chronic conditions and their complications. Unlike VCHIP, UPIQ has operated without matching funds from the Medicaid program and until recently relied heavily on other sources of funding, including the Centers for Disease Control and Prevention, pharmaceutical companies, and a number of private foundations to support its work.
- Washington's D.C.'s program, the **DC Partnership to Improve Children's Healthcare Quality (DC PICHQ)**, illustrates the effectiveness of such programs in an urban setting where the vast majority of children are covered by a Medicaid program. The concentration of children in the Medicaid program has enabled the improvement partnership to focus more narrowly on federally qualified health centers and other practices serving low-income patients. In those locations, DC PICHQ has helped to establish patient-centered medical homes. It has also worked to increase the consistency of children's health care across the city.

The following profiles describe the financing models and focus of each program.

The Vermont Child Health Improvement Program

- **Headquarters:** Department of Pediatrics, University of Vermont College of Medicine
- **Annual Budget:** \$8.64 million in 2011
- **Staff:** 32 staff members and 40 faculty working on a full- or part-time basis
- **Provider participation:** Approximately 90 percent of the state's 39 pediatric practices, 29 percent of state's family practices, and 100 percent of Vermont hospitals with obstetric services
- **Areas of focus:** Improving preventive services and prenatal care, increasing child mental health, reducing childhood obesity, and establishing patient-centered medical homes, among many other initiatives

The Vermont Child Health Improvement Program (VCHIP) was launched in 1999 as a vehicle for improving children's health care statewide. Organized and led by a partnership that includes representatives of Vermont's health department, the state chapter of the American Academy of Pediatrics, the state's Medicaid agency, Fletcher Allen Health Care (a tertiary care medical center), and the University of Vermont's College of Medicine, VCHIP designs quality improvement initiatives to address the concerns of local physicians and the state's health department as well as those of public and private payers, and then helps to implement them by providing education, tools, and practice-level coaching to pediatricians and family practice physicians.

Since 1999, VCHIP has overseen more than 40 quality improvement projects—many lasting from nine to 12 months—that among many other things have focused on improving the delivery of preventive services; managing chronic conditions such as asthma, attention deficit hyperactivity disorder, and obesity; and using assessments to identify risk factors for suicide and substance abuse among teens. To address these issues, VCHIP relies heavily on academic clinicians from the University of Vermont who use a portion of their time to design interventions and measurement-based strategies that increase adherence to evidence-based guidelines. Practice-level coaches, in turn, help practices identify and overcome barriers to incorporating the interventions into everyday practice.

“VCHIP has provided the pediatricians in the practices with a way to figure out how to get better, do it more efficiently, [and] incorporate all of these changes without getting frustrated,” says Judith Shaw, Ed.D., M.P.H., R.N., VCHIP's executive director. Providers also like it, she says, because “they know that we're monitoring the evidence base on a national level.”

VCHIP's first project, in 2000, was funded by philanthropic grants from private foundations and focused on improving the delivery of preventive services for children younger than five. Known

as the Vermont Preventive Services Initiative (VPSI), the project sought to ensure that pediatric practices met the recommendations of the U.S. Preventive Services Task Force and the American Academy of Pediatrics for immunizations, anemia screening, tuberculosis risk assessment and indicated screening, lead screening, infant sleep position counseling, environmental tobacco smoke-exposure risk, blood pressure screening, vision screening, risk assessments, and documented referral to a dentist. Based on a program implemented on a small scale in North Carolina, the program taught physicians in private practices how to increase adherence to recommended care by performing risk assessments, changing office procedures, and educating parents about the need for preventive care.

Although the program was strictly voluntary, more than 90 percent of the state's then-35 pediatric practices agreed to participate. Together the practices served more than 80 percent of the state's children under the age of five. VCHIP attributed the high participation rate to a number of factors, including the endorsement of the program by the state's AAP chapter and the health department,

The program taught physicians in private practices how to increase adherence to recommended care by performing risk assessments, changing office procedures, and educating parents about the need for preventive care

and the significant goodwill that resulted from the close ties of the state's physicians and the University of Vermont, which serves as the program's institutional home. "Physicians were also drawn by the opportunity to receive comparative data on their performance," says Sara Barry, M.P.H., VCHIP's assistant director.

To begin the program, VCHIP performed chart audits on a random sampling of 2-year-old and 4-year-old patients. The initial assessment revealed that adherence to recommended guidelines for 2-year-olds ranged from 8 percent for sleep position counseling to 74 percent for dental risk assessments. Adherence rates were higher for 4-year-olds, with 52 percent receiving dental referrals and 85 percent receiving blood pressure screenings (Figure 1).

A pediatrician and quality improvement coach from VCHIP provided feedback on the results of the chart audit and introduced physicians, nurses, and administrative staff to quality improvement methods, including the use of root cause analyses to identify the cause of problems and plan-do-study-act cycles to test remedies for them. Dedicated teams from the practices then attended three to four one-day training sessions, which covered best practices and barriers to improvement.² The practices were also required to report data on their performance on a monthly basis.

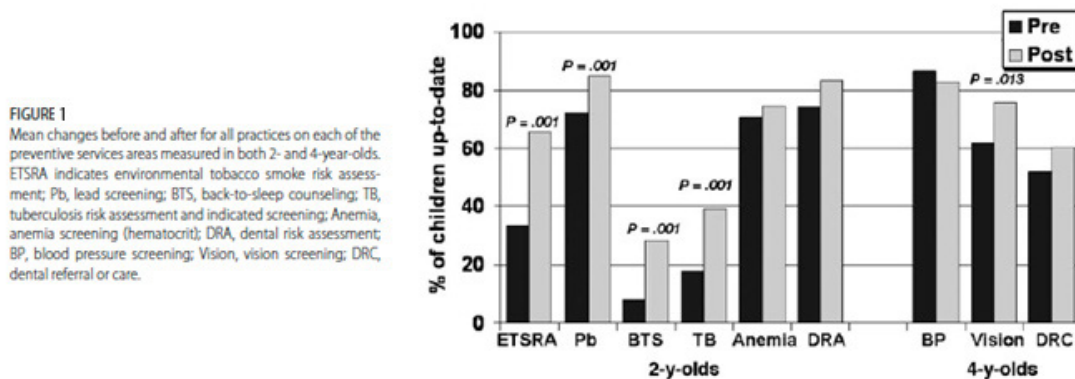
² J. S. Shaw, R. C. Wasserman, S. Barry et al., "Statewide Quality Improvement Outreach Improves Preventive Services for Young Children," *Pediatrics*, October 2006 118(4):e1-e9.

The sessions included representatives from Medicaid, private insurers, and public health and community agencies. “By having these people in attendance, they were able to learn about the constraints [practices faced] and vice versa,” Shaw says. “We heard people from public health and community agencies say, ‘I can help with that’ when the practice spoke about difficulties getting certain services for children.”

Unlike the North Carolina program, which determined the focus of the practice-level quality improvement programs, the Vermont initiative allowed practices to select a focus—such as increasing immunization rates or sleep position counseling. “We were looking at this in terms of building relationships that we needed to be able to sustain and grow,” Barry says. More than half of the practices opted to focus on assessing environmental tobacco smoke risk and lead and vision screening. To help the practices increase their adherence to evidence-based care, VCHIP provided the practice with new forms that would prompt questioning on these topics and increase the likelihood of proper documentation.

To assess the program’s effectiveness, VPSI relied on measures of documentation, process measures, and outcome measures.

Figure 1: Mean Changes Before and After for All Practices on Each of The Preventive Services Areas Measured in 2- year-olds



Source: J. S. Shaw, R. C. Wasserman, S. Barry et al., “Statewide Quality Improvement Outreach Improves Preventive Services for Young Children,” *Pediatrics*, October 2006 118(4):e1-e9

In a subsequent project, VCHIP worked with the 12 Vermont hospitals offering obstetric services to increase preventive services delivered to newborn babies following their birth. The services included hepatitis B immunization, assessment of breastfeeding, assessment of hyperbilirubinemia risk, metabolic and hearing screenings, assessment of and counseling on the risks of tobacco smoke exposure, infant sleep position, car safety seat fit, screening for exposure to domestic violence, and planning for follow-up outpatient care. *See Table 1 for results.*

The program, which similarly began with a chart review, offered the hospitals coaching from a team of experts, feedback on results, learning sessions, and help with measurement techniques.

To participate, each hospital was encouraged to form a multidisciplinary team, composed of a nurse, a physician, and a quality improvement specialist. The teams were provided with guidelines for each of the preventive health care services. The learning sessions emphasized guidelines that were difficult to implement, including planning for follow-up outpatient care, risk assessment for hyperbilirubinemia, and assessment of exposure to domestic violence.

Table 1: Preintervention Versus Postintervention Results, Unadjusted and Adjusted for Clustering of Patients at Hospitals

Variable	Proportion, %		Change	Unadjusted		Adjusted ^a	
	Preintervention	Postintervention		OR (95% CI)	P	OR (95% CI)	P
	Hepatitis B immunization	45.3		29.7	-15.6	0.51 (0.22-1.19)	.12
Assessment of breastfeeding adequacy ^b	49.4	80.6	+31.2	4.24 (1.16-15.46)	.03 ^c	4.49 (3.04-6.62)	.03 ^c
Assessment of risk for hyperbilirubinemia	14.4	23.4	+9.0	1.83 (1.08-3.11)	.03 ^c	1.96 (1.31-2.95)	.04 ^c
Metabolic screening	98.0	98.2	+0.2	0.98 (0.20-4.95)	.99	1.14 (0.39-3.33)	.89
Hearing screening	74.1	97.4	+23.3	13.38 (3.17-56.46)	.01 ^c	14.31 (7.05-29.06)	.01 ^c
Assessment of smoke exposure	52.5	66.7	+14.2	1.77 (0.91-3.44)	.09	1.77 (1.31-2.41)	.17
Assessment of sleep position	12.7	55.7	+43.0	8.81 (1.62-47.90)	.01 ^c	9.08 (6.21-13.28)	.02 ^c
Assessment of car safety seat fit	41.8	71.0	+29.2	3.41 (1.18-9.82)	.02 ^c	3.42 (2.51-4.67)	.04 ^c
Assessment of domestic violence	27.1	36.2	+9.1	1.43 (0.60-3.41)	.42	1.43 (1.04-1.96)	.51
Counseling on smoke exposure	22.7	52.6	+29.9	3.71 (1.29-10.66)	.02 ^c	3.75 (2.72-5.19)	.03 ^c
Counseling on sleep position	46.4	68.3	+21.9	2.49 (0.99-6.29)	.06	2.56 (1.88-3.47)	.08
Counseling on car safety seat fit	37.6	74.7	+37.1	4.99 (1.41-17.59)	.02 ^c	5.07 (3.67-7.01)	.02 ^c
Planning for follow-up care	80.3	71.4	-8.9	0.61 (0.25-1.51)	.31	0.60 (0.43-0.86)	.38

^a Adjusted on the basis of insurance status (Medicaid versus non-Medicaid) and length of stay of <48 hours.

^b Based on numbers of breastfed infants (preintervention: n = 271; postintervention: n = 278).

^c P < .05.

Source: C. E. Mercier, S. E. Barry, K. Paul et al., "Improving New Preventive Services at the Birth Hospitalization: A Collaborative, Hospital-Based Quality-Improvement Project," *Pediatrics* Sept. 2007 120(3):481-88.

As VCHIP's funding increased, it expanded its areas of focus to address additional perinatal, early childhood and school age and adolescent health care needs. Its Improving Care for Opioid-Exposed Mothers program provided training and promoted care coordination among obstetricians, pediatricians, substance abuse providers, social services and other professionals to improve care for opioid-dependent mothers and opioid-exposed newborns.³ The Vermont Youth Health Initiative helped practices assess risk behaviors and implement strength-based screening tools and referral recommendations. The program has also focused on increasing screening for sexually transmitted diseases, substance abuse, and mental conditions.

In 2006, VCHIP strengthened its focus on mental health issues by testing a care model developed by the University of Vermont's psychiatry department. Known as the Vermont Family-Based Approach, the model seeks to prevent and/or treat mental health issues in children by focusing on the mental health needs of the entire family. The family-based approach targets three discrete populations: families in which neither the children nor the parents have emotional problems; families in which the children do not show signs of emotional problems, but one or both of the parents exhibit problems; and families in which both the children and parents have psychological problems.

The services offered to families vary by category. In the first group, college-educated coaches at the practice level provide families instruction on topics ranging from nutrition and exercise to the value of music and reading. For the second group, the program assigns both a wellness coach to provide advice and a therapist with either a master's or doctorate degree in psychology as a consultant to the practice. The third group receives the most intensive services. For those families the program provides not only a wellness coach and therapist, but also a child psychiatrist who either provides direct services to the families or serves as a consultant to pediatricians and family practice physicians until the families can be seen by a child psychiatrist.

Thus far, the university has trained 40 therapists in the family-based approach, some of whom consult with private practices and others who are co-located in community mental health centers.

The program is being tested in a number of Vermont practices, as well as in some South Dakota schools. The goal says James Hudziak, M.D., director of the Vermont Center for Children, Youth and Families and the program's developer, is to have coaches co-located in patient-centered medical homes throughout the state.

VCHIP's funding played a critical role in the development of the mental health program. It "provided us with a way to free up my physicians' and Ph.D. faculty's time to develop new programs," Hudziak says.

³ See: www.healthandwelfare.idaho.gov/LinkClick.aspx?fileticket.

More recently VCHIP has been playing a key role in helping practices apply for medical home certification by providing tools to assess their strengths and capabilities and facilitators who work directly with practices to help them meet requirements for managing chronic conditions and assuring patient engagement, among other criteria for medical home recognition. “They had tools and sheets so we weren’t recreating the wheel,” says Jill Rinehart, M.D., a pediatrician whose practice was the first pediatric practice in Vermont to be recognized by the National Committee for Quality Assurance as a Level 3 medical home.

VCHIP also provides a forum for discussing how state-provided community health teams—composed of nurse coordinators, behavioral health counselors, and social workers—would be shared among pediatric practices. These teams work with primary care providers to assess patient needs, coordinate community-based support services, and provide multidisciplinary care.⁴ “We aim to adapt the community health team approach to best meet the needs of children and families,” Shaw says. “Having people with pediatric training is important. Since children spend a considerable amount of time in schools, we also need to coordinate with the resources available in the school.”

Lessons and Implications for Other States

Because of its long history and the depth and range of its quality improvement initiatives, VCHIP is considered the nation’s preeminent improvement partnership and a model for other improvement partnerships around the country. Part of its success stems from the state’s unique features, including its small size. The state has only 125 pediatricians who practice in one of 39 offices across the state. Its population is also relatively homogenous. Ranked 49th among U.S. states in total population, Vermont has limited racial and ethnic diversity. (Caucasians made up 95.3 percent of the population in 2010.⁵) It also has one children’s hospital, the Vermont Children’s Hospital at Fletcher Allen, which eliminates potentially problematic competition among academic medical centers. Having a single state health department and a small number of insurers has also fostered collaboration. The state’s health department meets annually with VCHIP to review its priorities and match them with faculty interests and potential funding opportunities, Shaw says. The health department also shares data with VCHIP to identify opportunities for improvement.

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4 C. Bielaszka-DuVernay, “Vermont’s Blueprint for Medical Homes, Community Health Teams, and Better Health at Lower Cost,” *Health Affairs*, March 2011 30(3):383–8 6.

5 U.S. Census Bureau.

The state also leads the nation in state-based health reform. Through its Vermont Blueprint for Health, the state has spurred the development patient-centered medical homes and supports them with community health teams. The program, which is funded by public and private payers, aims to ensure that all Vermont residents have access to quality care.

Perhaps one of VCHIP's most important distinctions is its funding model. Because it is headquartered at a state-run medical school, VCHIP is able to take advantage of the Medicaid match program, which allows institutions to draw federal funds by matching them against non-federal funds spent by the University of Vermont. The match, which is based on the percentage of salaries

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of faculty working for the partnership at the state university, enables VCHIP to hire additional staff and finance new programs. Medicaid dollars now pay for 55 to 60 percent of VCHIP projects. Philanthropic support has also helped.

Despite these unique characteristics, VCHIP's experience still offers important lessons for larger states with more complex health systems. Among them is the importance of encouraging voluntary participation. "We don't come (to your practice) unless we are invited," says Lewis First, M.D., chief of pediatrics at Vermont Children's Hospital at Fletcher Allen.

VCHIP has also succeeded in its efforts because it treats pediatricians and family practice physicians as experts and encourages them to form multidisciplinary groups within their practices. Once formed, the practices are urged to implement simple, incremental changes. Transparency of results from multiple practices also helps to spur competition among practices and with that higher performance. "It didn't take anything more than that for people to start saying, 'Oh, I can do better,'" says Barry.

Moreover, the practices now have the skills to take on quality improvement projects they identify for themselves. "They have seasoned staff. It's not just the physicians or nurse practitioners. It's the administrative and the nursing and office staff who have participated. We have a workforces that's really primed to do this work," says Wendy Davis, M.D., director of maternal child health for the Vermont Department of Health.

Utah Pediatric Partnership to Improve Healthcare Quality

- **Headquarters:** Department of Pediatrics, University of Utah School of Medicine
- **Annual Budget:** Approximately \$1 million
- **Staff:** 10, including four medical home coordinators, three practice coaches, a senior program manager, a physician and an administrative assistant
- **Provider Participation:** 190 clinicians from 80 practices, including 116 pediatricians (representing 40 percent of the state's total), 38 family practice physicians and 36 mid-level providers
- **Areas of focus:** Preventive services; screening for developmental delays and maternal depression; management of asthma, attention deficit and hyperactivity disorder, and childhood obesity; coordination of care for children with special health care needs; and medical home implementation (see Appendix A for a complete list of projects.)

The Utah Pediatric Partnership to Improve Healthcare Quality (UPIQ) was established in 2003 to improve children's health by promoting evidence-based standards of care and assisting physicians in implementing practice-level quality improvement programs.

The partnership brings a wide range of stakeholders together to identify unmet needs and develop strategies to address them. Participants include the University of Utah School of Medicine's pediatrics department, the Utah chapter of the American Academy of Pediatrics, the Utah Department of Health (which includes the state's Medicaid agency), and the state's quality improvement organization. Other longstanding members include the Utah chapter of the American Academy of Family Physicians, two family advocacy groups, a parent advocate, and representatives of Intermountain Healthcare, a Salt Lake City-based integrated delivery system.

Since its founding, UPIQ has led more than 20 quality improvements initiatives, each focused on a specific topic, such as enhancing the delivery of preventive services, increasing screening for developmental delays, and identifying and managing medical conditions common to children, such as asthma, obesity, and attention deficit and hyperactivity disorder. To do so, UPIQ relies heavily on learning collaboratives, which provide pediatricians and family practice physicians with the education, guidance, and tools they need to improve care.

The collaboratives typically bring together dedicated practice teams—comprising physicians, nurses (or medical assistants), office managers, and parents—for daylong learning sessions that begin with an introduction to evidence-based standards of care, and help to identify barriers to their

use and strategies for overcoming them. These teams also participate in monthly conference calls, which enable them to monitor their progress in reaching improvement goals. UPIQ staff perform site visits as necessary to help practices use quality improvement techniques; the staff also use distance-learning programs to reach pediatricians who work in the rural areas of the state.

UPIQ's first project, launched in 2003 with an \$11,000 grant from the Primary Children's Hospital Foundation, aimed to increase physicians' delivery of preventive services by encouraging medical practices to measure their performance and use quality improvement methods, including rapid-cycle improvement techniques, to overcome identified weaknesses. Each of the 14 practice teams participating in the learning collaborative agreed to increase the delivery of one or more preventive services by developing a specific plan for change. Half of the practices chose to focus on obesity screening by improving the proportion of 4-year-olds whose body mass index was plotted. Half opted to increase the proportion of their patients who had a vision screening, and three chose to improve their rates of anemia screening. One chose to increase the proportion of patients who were fully immunized.

UPIQ leaders stressed the importance of making small incremental changes—for instance, by having only one physician in the practice test the change for one afternoon

In the learning collaborative, UPIQ leaders stressed the importance of making small incremental changes—for instance, by having only one physician in the practice test the change for one afternoon as opposed to trying to gain office-wide participation in the program.

To measure the program's effectiveness, UPIQ audited the practices' medical charts and found the mean number of preventive services provided to 2-year-olds increased from 4.0 to 4.9. The mean number for 4-year-olds increased from 3.8 to 5.6. The rates in the areas the practices chose to emphasize increased significantly more than those they did not target (see Table 2); however there were some untargeted categories that also showed improvement, suggesting that programs with a limited focus can lead to more widespread change.⁶

⁶ P. C. Young, S. DeBry, W. D. Jackson et al., "Improving the Prevention, Early Recognition, and Treatment of Pediatric Obesity by Primary Care Physicians," *Clinical Pediatrics*, October 2010 49(10):964-69.

Table 2 Effect of Goal Setting

Preventive Service	% at Baseline (% Change)		P ^a
	If Service Was a Goal	If Service Was Not a Goal	
Two-year-olds			
Fully immunized	55 (28)	68 (11.5)	.075
Anemia screening	48 (14)	48 (10)	.58
Dental assessment	46 (47)	76 (13.5)	.002
ETS exposure assessment	25 (54)	27 (27)	<.001
Four-year-olds			
Fully immunized	90 (-20)	74 (1)	.114
Vision screening	42 (32)	49 (34)	.80
BP screening	38 (24)	68 (16)	.56
BMI plotted	21 (51)	25 (-5)	<.001
Dental assessment	29 (38)	31 (37)	.86
Car seat advice	57 (36)	30 (24)	<.001

^a Random-effects logistic regression.

Source: P. C. Young, G. G. Glade, G. J. Stoddard et al., "Evaluation of a Learning Collaborative to Improve Delivery of Preventive Services by Pediatric Practices," *Pediatrics*, May 2006 117(5):1469-76.

Over the next year, UPIQ conducted four additional learning collaboratives that used a similar approach to increase screening for developmental delays, social and emotional problems in infants and toddlers, and attention-deficit/hyperactivity disorder. The projects, which were funded by the American Academy of Pediatrics and Utah's Medicaid program, encouraged the use of a Web site (jointly developed by the University of Utah, the state health department, a family advocacy organization and others) that provides physicians and families with reliable and detailed information to meet the requirements of children with special needs and intervene or prevent the development of chronic conditions and their complications. (<http://www.medicalhomeportal.org/>)

Intended to demystify the process of obtaining special services for children with special needs, the Web portal contains more than 600 pages of content and an equal number of citations to scientific literature. It offers an overview of school programs and procedures for requesting special services and also contains more general guidance on screening for developmental, sensory, nutritional, and other health-related problems, as well as reviews and guidance on the use of wheelchairs, hearing aids, gastrostomy tubes, and other technology commonly used by children with special needs.

Medical Home Implementation

Helping physicians meet the needs of children with disabilities and development delays has been a priority the state of Utah and UPIQ. To do so, UPIQ received \$243,000 in funding from the state's health department to conduct a number of learning collaboratives that focused on building medical homes for these children. In 2006, the first of these collaboratives introduced physician practices to the concept of medical homes, team-based models of care, and family partnerships, as well as process improvement techniques.

In all, UPIQ has held seven learning collaboratives on the medical home with the aim of enhancing collaborations between medical practices with community service organizations, and improving transitions to adult care for children with special needs.

A distinguishing feature of UPIQ's medical home program is its use of family partners, who receive a small stipend to serve as a resource for other families with children with special needs

Over this period, UPIQ also offered learning collaboratives on the management of chronic conditions.

UPIQ was able to expand on its medical home efforts in 2010 when it received funding from the state's Children's Health Insurance Program's Quality Demonstration Grant to provide several pediatric primary care and sub-specialty care practices with medical home coordinators who work with the practice teams and families in redesigning care processes and leveraging health information technology to improve care.

The medical coordinators, who are registered nurses, also provide care coordination services for high-acuity patients. In this role, they assess patients' health needs and collaborate with families, physicians, community resources, and insurers to improve care. Each coordinator works with two or three medical practices at a time. The grant has also enabled UPIQ to hire coordinators to work with subspecialty practices to improve communication and coordination between primary care and specialty care providers by helping to develop a standardized referral process and serving as a liaison between the practices and the families.

A distinguishing feature of UPIQ's medical home program is its use of family partners, who receive a small stipend to serve as a resource for other families with children with special needs. The family partners help to organize events, such as guest speaking engagements on a topic of relevance to children with special needs and they provide feedback to practices on their operations. In one example, the family partner pointed out that visits to the hemophilia clinic were long and repetitive as different providers asked similar questions. The clinic instituted the use of clipboard to keep

track on the information that had already been collected by previous providers. “They’ve been able to cut those visits down by at least an hour,” says Kristi Colleran, UPIQ’s former senior program manager. The family partners have proved so helpful, many practices are using or have requested a second one, Colleran says.

Addressing Childhood Obesity

In 2008, UPIQ took up the issue of childhood obesity with funding from the Utah Department of Health, the Utah Chapter of the American Academy of Pediatrics, as well as the Church of Jesus Christ of Latter-Day Saints Foundation, the Marriner S. Eccles Foundation, and the Utah Medical Association Foundation. The initiative used a similar approach—inviting teams from medical practices to a half-day seminar that covered evidence-based recommendations for the prevention, recognition, and management of overweight children, as well as motivational interviewing techniques.

UPIQ suggested that physicians encourage parents to provide five servings per day of fruits and vegetables, limit television and video screen time to less than two hours per day, ensure their children get at least one hour of daily exercise, and allow zero consumption of sweetened beverages. The first program recruited 20 practice teams, 18 of which remained active in the program. They were encouraged to participate in monthly conference calls and to perform chart audits, which revealed that the percentage of patients with a body mass index plotted in the chart increased from 55 percent of charts at the outset to 97 percent at nine months. The program was repeated three times as a result of provider demand and ultimately reached 25 percent of the state’s pediatric practices.

Meeting the Mental Health Needs of Patients

In 2011, UPIQ launched a learning collaborative that focused on the identification, evaluation, and initial management of children with mental health problems, based on a survey of physicians who identified this as an area of concern for them. The project began as a collaboration with the president of the Intermountain Academy of Child and Adolescent Psychiatry, who provided training to primary care doctors on medication management and the use of referrals. UPIQ reinforced these messages through free webinars that educated physicians about standardized screenings.

To address the shortage of mental professionals in the state (particularly in rural communities), the Intermountain Academy also provided medical practices access to seven psychiatrists who agreed to serve as informal consultants.

Lessons and Implications for Other Improvement Partnerships

By bringing together diverse stakeholders UPIQ has created a forum for the health department and the Medicaid agency, among others, to open a dialogue with physicians in private practice about areas of mutual concern. “I think that [is] one of the huge benefits of our participation. We have a venue to reach pediatric practices as well as family medicine practices [to discuss] the care they deliver to kids,” says Nan Streeter, M.S., R.N., the director of the maternal and child health bureau at the Utah Department of Health and deputy director of the its Division of Family Health and Preparedness. In one example, the dialogue helped to identify one reason developmental screenings were not provided at the same rate as preventive services: the Medicaid agency paid for both in one lump sum and physicians tended to provide preventive services without the developmental screening. “We’re working with Medicaid to try to change that,” Streeter says.

UPIQ’s use of family advocates also plays a key role in its successes, particularly with respect to the management of children with special needs.

Lessons and Implications for Other States

Funding has been a challenge for UPIQ throughout much of its history. Unlike the Vermont Child Health Improvement Partnership, which was able to obtain Medicaid matching funds from the federal government, UPIQ has had to pursue funding from a wide variety of sources, including the Centers for Disease Control and Prevention, pharmaceutical companies, and a variety of philanthropic organizations.

As a result, the viability of the program has been more precarious than Vermont’s. It also compelled UPIQ to launch programs in a more opportunistic fashion by organizing learning collaboratives around topics of importance to funders.⁷ Still, UPIQ’s success in launching more than 20 programs despite this challenge demonstrates that it is possible to make substantial progress by aggressively pursuing grants. (UPIQ’s stability has since become more secure—at least in the near term—as a result of Utah’s receipt of a five-year CHIPRA grant, which raised the organization’s annual budget from a range of \$100,000 to \$200,000 to more than \$1 million.) Having a committed group of participants helps, says Chuck Norlin, M.D., the UPIQ’s director and a professor in the department of pediatrics at the University of Utah Health Sciences Center. “The most important thing is to have other people to share the work and share the enthusiasm to keep you going through the rough times,” Norlin says.

⁷ Having an institutional home at the University of Utah also helped to absorb some of the costs during the lean years.

DC Partnership to Improve Children’s Healthcare Quality

- **Headquarters:** Children’s National Medical Center
- **Launched:** 2005
- **Annual Budget:** \$850,000
- **Staff:** 7.7 full-time equivalents, including one physician, two quality improvement coaches, and two data analysts
- **Provider Participation:** 350 physicians have participated in at least one quality improvement initiative.

The DC Partnership to Improve Children’s Healthcare Quality (DC PICHQ) was launched in November 2005 to improve the quality of health care services provided to the District of Columbia’s children.

Operating in a geographically small city with large pockets of poverty (some 50 percent of the city’s children live in low-income families whose incomes are at or below 200 percent of the federal poverty level), the improvement partnership seeks to improve care by implementing quality improvement initiatives at the practice or system level. DC PICHQ’s first project brought together representatives of the city’s health department, the local chapter of the American Academy of Pediatrics, the district’s Medicaid agency, health plans serving the Medicaid population, local academic medical centers, and local federally qualified health centers⁸ to improve the delivery of Early Periodic Screening, Diagnosis, and Treatment (EPSDT) benefits and services for children in the Medicaid program.

Since then, narrower groups of stakeholders have gathered to identify other areas of need such as managing obesity and improving the delivery of preventive services and developmental screenings—and then developed and promoted initiatives to address them. DC PICHQ has also worked to increase access and coordination of care by helping pediatric practices qualify for medical home recognition.

⁸ At times, DC PICHQ’s steering committee has also included parents and representatives of the city’s public schools.

Improving Screening for Developmental Delays and Disabilities

The improvement partnership's first project stemmed from a lawsuit that alleged the Medicaid agency had failed to provide the District's children with required EPSDT benefits and services.⁹ That lawsuit led to a court order that required the District to ensure that all Medicaid-eligible children received age-appropriate screening as well as follow-up treatment. Local pediatricians, who were expected to carry out this mandate, suggested using the court order as an opportunity to standardize and simplify the form they would use to document the delivery of these services.

The form that was ultimately developed—the standardized medical record form or SMRF—contains information on the patient's birth and family history, the results of a developmental and environmental assessment, records of immunizations, and results of a physical exam (See Appendix A <http://dchealthcheck.net/resources/healthcheck/smrf.html>.)

The learning collaborative created an opportunity for practices

small and large, academic and private, to work together.

To ensure the information was collected consistently (for instance, that each tuberculosis screening had documentation of risk factors), DC PICHQ organized a learning collaborative that reviewed methods for screening for disabilities and diseases, which helped reinforce the use of a standard nomenclature and to ensure measures reported by one practice were equivalent to those reported by another. “It was a great exercise in practices small and large, academic and private, working together to agree that we should be hitting on certain key messages as part of the well-child visit,” says Mark Weissman, M.D., director of DC PICHQ and chief of general pediatrics and community health at Children's National Medical Center.

The collaborative was funded with \$150,000 from the city's four Medicaid managed care plans that were also subject to the documentation requirement. To provide further incentive for physicians to adopt the new reporting methods, the health plans also agreed to participate in a pay-for-performance pilot that would offer physicians \$3 for each completed form.¹⁰ Additional support to help physicians incorporate the collection of data into their workflows was made available through a web-based training program developed through the Bright Futures program at Georgetown University.

⁹ Salazar v. D.C. 1997 WL 30676 (DDC)

¹⁰ The insurers ultimately paid \$400,000 to support these efforts.

Because nearly all pediatricians in the District see Medicaid patients, the program had a far reach. “About two years from the time we started, we had about 80 percent of the Medicaid-enrolled (children) in the city receiving care in practices that had adopted the SMRF,” Weissman says. Many also incorporated the form into their electronic medical record systems. Weissman says the form also helped to increase adherence to best practices because it cued physicians to perform a more comprehensive exam. “When we looked at charts in our setting, kids [were getting] appropriate care 90 percent of the time,” he says.¹¹

Improving Immunization Rates

One of DC PICHQ’s next projects sought to improve immunization rates for 19- to 35-month-old children, an age band that is used for benchmarking by the Centers for Disease Control and Prevention and as a measure of access to care and care delivery. To improve rates, DC PICHQ staff worked with seven health centers in the Children’s National Medical Center, the institutional home of the improvement partnership and a significant provider of pediatric primary care for the District’s Medicaid program. They also worked with clinics associated with Unity Health Care, a network of 30 federally qualified health centers that also serves a large number of children in the Medicaid program.

For this initiative, the city’s health department provided \$450,000 in funding and also supplied data from its immunization registry to identify children in need of immunizations. With that information and the guidance on measuring performance, testing change, and monitoring results, “we were able to improve immunization rates for all kids assigned or attributed to [Children’s National Medical Center’s] health centers from 85 percent to 92 percent,” Weissman says. That improvement boosted the citywide immunization rates from the low 70s to close to 80 percent, he says.

Building Medical Homes

In another project, DC PICHQ conducted a nine-month-long learning collaborative to help seven health centers at Children’s National Medical Center qualify for medical home recognition. To do so, a practice team composed of a physician, a nurse, and an administrator from each health center attended a kick-off session that introduced the concept of the medical home and provided guidance on best practices. That meeting was followed by monthly visits from two staffers from DC PICHQ—one a nurse and another an employee with a background in public health—who helped

¹¹ To assess performance, Children’s National Medical Center used the methodology of Rita Mangione-Smith and colleagues in a 2007 paper. See R. Mangione-Smith, A. H. DeCristofaro, C. M. Setodji et al., “The Quality of Ambulatory Care Delivered to Children in the United States,” *New England Journal of Medicine*, Oct. 2007 357(15):1515-23.

the health centers improve access and develop systems for managing common conditions such as asthma and obesity and for providing preventive care services. The DC PICHQ's leadership meets monthly to monitor performance and identify areas for improvement, using the data from the medical center's electronic medical record system.

The medical home initiative relies heavily on the involvement of parents, who are paid by the hospital to not only provide other parents with special needs with peer-to-peer counseling, support, and guidance, but also for being present at every medical home planning meeting. They serve as a valuable sounding board for the health centers as they redesign their services, Weissman says. "The parents push us," he says. As an example, when it came to improving access, the practices set a goal of returning every parent's call by the end of the day. "We were able to turn to our parents and say, 'So, how good is that?' They said if I have a sick child or need something, I need the information now, not at the end of the day," he says.

All seven of the practices qualified for National Committee for Quality Assurance's level-three recognition, the highest rating possible. DC PICHQ plans to expand the program outside of the institution's walls. "Now we have the skill set and experience to coach and mentor other practices in the region," Weissman says. That process has begun with the region's FQHCs.

Obesity Collaborative

DC PICHQ has been expanding other learning collaboratives regionally. A recent collaborative on childhood obesity now includes 150 providers from 30 practices across the District, Maryland, and Virginia. The practices receive training through web-based programs on screening methods and nutrition counseling, among other topics; participate in conference calls to learn from one another; and are visited by improvement coaches from DC PICHQ, who assist in training the practices in quality improvement methods. Participating practices earn 28 hours of continuing medical education credit. "That is a rich return on investment for them," Weissman says.

Going forward, the improvement plans to focus on communication and co-management of patients among primary care and specialty care doctors.

Lessons and Implications for Other States

The DC PICHQ is distinguished from improvement partnerships in Vermont and Utah by a number of factors, including the multiplicity of academic medical centers that operate in its region and the large number of pediatricians who are employed by these systems. Both benefit DC PICHQ when these institutions provide practices with internal support and time to invest in quality improvement initiatives. Working with physicians in small practices has been significantly harder. “We are trying to figure out how to be able to support the solo doctors—they are stretched so thin. We haven’t figured it out yet,” Weissman says.

Because DC PICHQ focused its first efforts on standardizing data collection, the region is uniquely positioned to use it for data mining purposes—for instance it could aggregate data in a registry that would allow it to draw conclusions about the prevalence of certain conditions in the District and thus prioritize public health campaigns. Doing so, however, will require capital investment and a long-term commitment from the government, as well as the Medicaid managed care organizations. It may be possible to create a registry that is independent of the government because many of the practices and health centers use the same electronic medical record system. “There’s a lot of opportunity to be capitalized on,” says Robert Zarr, M.D., M.P.H., past president of the D.C. chapter of the American Academy of Pediatrics.

The fact that the Medicaid program covers so many children in the District has both helped and hurt. “It’s not as complicated as having 45 payers,” Zarr says. But fluctuations in the market as Medicaid plans enter and exit—as well as changes in political leadership in the District—can have a significant effect on the DC PICHQ’s programs. Because of this, DC PICHQ has focused its efforts more narrowly on a small number of practices that have a large component of Medicaid members. As opportunity allows, it plans to expand these program regionally.

Conclusion

The improvement partnerships in Vermont, Utah, and Washington, D.C., provide instructive examples for state and federal policymakers as they seek ways to improve physician performance on quality indicators. The experience in VCHIP in particular, as well as states that have followed its lead, offers valuable lessons on how to structure and govern such partnerships, fund them, and use them to engage physicians in private practice. These lessons include the value of tying participation in partnership activities to physician board certification, facilitating the development of health information technology for child health, and fostering collaboration among state regulators and providers to identify and reduce barriers to high-quality care.