

Emerging Health Information Technology for Children in Medicaid and SCHIP Programs

The Children's Partnership and The Kaiser Commission on Medicaid and the Uninsured

Prepared by
Beth Morrow
The Children's Partnership

November 2008

e-health snapshot

The Children's Partnership

The Children's Partnership (TCP) is a national, nonprofit organization working to ensure that all children—especially those at risk of being left behind—have the resources and the opportunities they need to grow up healthy and lead productive lives. The Children's Partnership focuses particular attention on the goals of securing health coverage for uninsured children and ensuring that the opportunities and benefits of digital technology reach all children and families. TCP's program, "Defining and Promoting an E-Health Agenda for Children," aims to harness information & communications technology to improve the health of America's children. With input from its highly respected advisors, The Children's Partnership advances its goals by combining national research with state-based activities that translate analysis into local action. The Children's Partnership has offices in Santa Monica, CA and Washington, D.C.

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The Kaiser Commission on Medicaid and the Uninsured

The Kaiser Commission on Medicaid and the Uninsured provides information and analysis on health care coverage and access for the low-income population, with a special focus on Medicaid's role and coverage of the uninsured. Begun in 1991 and based in the Kaiser Family Foundation's Washington, D.C. office, the Commission is the largest operating program of the Foundation. The Commission's work is conducted by Foundation staff under the guidance of a bi-partisan group of national leaders and experts in health care and public policy.

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THE KAISER COMMISSION ON
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FOREWORD

A Message From: The Kaiser Commission on Medicaid and the Uninsured

Medicaid and SCHIP play a key role in covering the nation's low-income children, providing access to the care and services necessary for a healthy start in life. As demonstrated by research conducted by the Kaiser Commission on Medicaid and Uninsured, the programs have been key to reducing the uninsured rate of America's children and significantly improving children's access to health care, to a level on par with private insurance.

Over time, Medicaid and SCHIP have evolved to reflect changing trends in health coverage and delivery, including advances in health information technology (HIT). In recent years, states have been innovators in utilizing HIT in their Medicaid and SCHIP programs. As documented in the first *E-Health Snapshot: Harnessing Technology to Improve Medicaid and SCHIP Enrollment and Retention Practices*, states have made great strides in using HIT to help get and keep children enrolled in Medicaid and SCHIP. This second *E-Health Snapshot: A Look at Emerging Health Information Technology for Children in Medicaid and SCHIP*, expands upon and updates this research, documenting new and creative ways states are incorporating HIT across a wider range of functions of their programs, from outreach and enrollment and service delivery and care management to communications with families and broader program planning and improvement.

In addition to documenting these exciting developments in state HIT activity, this Snapshot provides policymakers, program planners, and other key stakeholders a roadmap for moving ahead with new HIT tools. As evidenced in the Snapshot, states can take a number of steps to get new HIT off the ground, including coordinating with and leveraging resources from the private sector, but federal leadership and funding is key for continuing to support and advance state Medicaid and SCHIP HIT efforts.

FOREWORD

A Message From:

Wendy Lazarus & Laurie Lipper

Founders and Co-Presidents, The Children's Partnership

Today, a growing number of Americans are seeing improvements in their health thanks to the wise use of technologies like telemedicine and electronic medical records. These technologies have the potential to greatly benefit children, and Medicaid and the State Children's Health Insurance Program (SCHIP)—which together serve more than one quarter of the nation's 78 million children—are increasingly pursuing important HIT innovations to improve services and outcomes for children. These exciting developments are due in no small part to federal investment through Medicaid Transformation Grants and other forward-looking initiatives.

This *E-Health Snapshot: A Look at Emerging Health Information Technology for Children in Medicaid and SCHIP Programs* summarizes the array of HIT that is being developed and deployed by Medicaid and SCHIP. It highlights for policy-makers, philanthropists, program planners, and other stakeholders the outcomes that can be achieved through HIT and provides insights into the lessons learned from other states' experiences.

With health reform, SCHIP reauthorization, and HIT legislation certain to come before the new Congress and a new President in 2009, there is a unique opportunity to advance HIT efforts on behalf of children through flexible grant funding, reliable ongoing funding, and policies that promote greater collaboration and efficiency.

The Children's Partnership (TCP), in collaboration with the Kaiser Commission on Medicaid and the Uninsured, published this Snapshot as part of our e-Health Program. TCP's mission is to undertake research, build demonstrations in local communities, and promote public and private policies and practices that harness information and communications technology to improve the lives of America's children.

The Children's Partnership looks forward to working with leaders in the public and private sectors to promote the innovative use of HIT to serve our children more effectively.

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In addition, this Snapshot and its recommendations are the result of extensive conversations with the many state officials interviewed and referenced at the end of each state profile. Others who shared their knowledge about HIT innovations include Claudia Page of Center to Promote HealthCare Access, Rick MacCornack of Northwest Physicians Network, Caroline Davis of HMA, Sarah deLone of National Academy for State Health Policy, Ed Donovan and Barbara Rose of Cincinnati Children's Hospital, and Chad Anderson of KVC Behavioral HealthCare, Inc. Finally, thanks to colleagues from The Children's Partnership who helped with this project: Wendy Lazarus, Terri Shaw, Jenny Kattlove, Stefanie Gluckman, Carrie Spencer, and Hana Bieliauskas.

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EXECUTIVE SUMMARY

This *E-Health Snapshot* highlights promising state health information technology (HIT) activities carried out through Medicaid and State Children's Health Insurance Program (SCHIP), with a specific focus on those that benefit children. HIT solutions can support systemic improvements and help address persistent health challenges facing America's children. Because Medicaid and SCHIP serve more than a quarter of all American children, HIT efforts in these programs have a significant impact on children's health care.

This report finds that states are innovators, utilizing HIT in their Medicaid and SCHIP programs across the range of program functions, from outreach and enrollment, and service delivery and care management to communications with families, and broader program planning and improvement. Though many of these HIT efforts are still in their infancy and data on their impact is limited, early findings indicate improvements in access to care, care coordination, case management, and administrative efficiency.

This Snapshot is not an exhaustive summary of Medicaid and SCHIP HIT activity, but rather a sampling of efforts that offer states a range of replicable, promising approaches to improve children's health (see Appendix A: "Examples of State Medicaid and SCHIP HIT Efforts" for an overview of profiled efforts). Based on interviews with state HIT leaders and national experts, it introduces policymakers, program planners, and other key stakeholders to the variety of HIT opportunities available to improve Medicaid and SCHIP and provides a roadmap for moving ahead with new HIT tools.

Overview of State Medicaid and SCHIP HIT Efforts to Improve Children's Health Care

HIT in Outreach, Enrollment, and Renewal Practices

There has been significant state activity around using HIT to simplify Medicaid and SCHIP application, enrollment, and renewal practices. For example, many states provide online applications and use the Internet to convey program and eligibility information to families. See the earlier "[E-Health Snapshot: Harnessing Technology to Improve Medicaid and SCHIP Enrollment and Retention Practices](#)" for an overview of state HIT efforts to simplify Medicaid and SCHIP enrollment and renewal processes.

There is growing state interest in using HIT to support targeted outreach to uninsured but eligible children. Oklahoma, for example, is building an online Medicaid enrollment Web site and providing computer kiosks in community locations, such as Food Stamp offices and hospitals. South Carolina used its data system to target outreach to uninsured children using emergency rooms and found that the effort led to a 30% reduction in emergency room use by uninsured children the following year. Florida is running data checks to identify and target outreach to Food Stamp households that contain children who are not enrolled in Medicaid.

Less pervasive but promising approaches also include using data exchange to facilitate automatic or ex parte enrollment or renewals. Pennsylvania, for example, automatically transfers eligibility information between Medicaid, SCHIP, and adultBasic (the state's program for low-

income, uninsured adults). This transfer takes place when a person applies and also when an enrollee loses eligibility in one program but qualifies for another. The data transfer has led to a significant increase in referrals between the program agencies. Washington uses information families routinely give to update or recertify Food Stamps or cash assistance to automate Medicaid renewal, and Utah is launching a new system that will automate eligibility determinations for multiple programs, including Medicaid. Massachusetts is building the capacity to instantly certify and/or verify birth records within the state and across state lines to assist in meeting documentation requirements under the Deficit Reduction Act of 2005.

Quality Improvement and HIT

Some states are using HIT to improve quality of care for children by facilitating communications and data sharing across agencies and providers. Arkansas, Rhode Island, New Jersey, Hawaii, and Wisconsin all have been developing data systems that can be accessed by providers to obtain patient information such as medical histories and service utilization. In Rhode Island, one health center that incorporated the data system into its workflow had 95% of its children up-to-date on immunizations compared to the statewide average of 72%. ER clinicians in Wisconsin report that data sharing is allowing them to identify patients repeatedly using the ER and refer them for case management services. Beyond data sharing, Arkansas is also using its data system to provide higher reimbursement to physicians with higher EPSDT screening rates, and, in the first year, it experienced an 8% increase in EPSDT screenings. Similarly, Hawaii plans to use data from the system to provide feedback to providers on their EPSDT performance.

HIT is also being utilized to improve providers' ability to evaluate children's health needs and provide appropriate and effective care. Indiana is using a Web-supported mental health assessment tool for children and adolescents to enable providers to use more objective standards to assess needs and make treatment decisions. In its first year of operation, 30,000 children and youth were screened using the tool, and the state is factoring findings regarding levels of need for wraparound services into program and budget planning. New Mexico is developing a statewide e-prescribing program, and Utah is using Medicaid claims data to identify inappropriate medication use and design evidence-based recommendations for care.

Some states are using HIT tools to meet the needs of specific vulnerable pediatric populations. The state of Texas and the county of Milwaukee, Wisconsin both created electronic health records that facilitate information sharing and medical services coordination for children in foster care. The coordinated services in Milwaukee have been credited with reducing the average daily census of children in long-term residential placement by 60%—from 364 per day to fewer than 140 per day. Vermont is developing a Web-based clinical information system to manage and evaluate care for the chronically ill.

Increasing Connections and Communications with Families through HIT

Many states are beginning to use HIT to provide services to families in new ways and help them manage their children's health. California created a statewide telemedicine network to improve access to health care in rural areas. The network currently supports 65 telemedicine sites and was

used in nearly 2,000 patient encounters in 2006. Oregon is trying to enhance patient engagement in care by creating a robust, clinical personal health record that the family controls.

HIT is also helping states educate families about their health. Vermont created a community health Web resource with information about chronic disease, health maintenance, and mental health and substance abuse as well as other concerns. Planning is underway to use this resource as a means for providing disease management tools. As part of a broader HIT effort, Wyoming is reimbursing providers for educating patients about wellness, prevention, and disease management, and is distributing education and billing materials electronically to encourage providers to take on this role. Following implementation in 2007, pediatricians in Wyoming are making 65% more referrals to the state's case management and health coaching program.

HIT and Program Evaluation, Improvement, and Modernization

Some states are using HIT to assist in program planning and undertaking significant system redesigns as a step toward modernizing their programs. South Carolina uses data from a broad cross-agency statistical data warehouse to evaluate the impact of public services at a population level and to design program improvements. Arizona and Alabama are constructing statewide electronic health systems that will not only include electronic health records, but also build in data-driven, outcome-focused quality improvement and clinical decision support tools.

State Strategies for Moving Forward with HIT

While HIT innovations have the potential for significant program improvements and long-term cost-savings, states interested in pursuing new efforts face a number of challenges. Following are some key lessons learned from state experience in moving forward with HIT efforts.

Federal funding has been essential for states to move forward with HIT efforts. One of the primary financing resources upon which states have relied is federal funding available through Medicaid grants (particularly the recent Medicaid Transformation Grants) and administrative matching funds. Some states also obtained funding through grants from other federal agencies (such as the Centers for Disease Control and Prevention and the Maternal and Child Health Bureau), private organizations, and through funds generated from licensing, sales, or usage fees for HIT components. States also pointed to the importance of identifying potential long-term cost-savings to help make the case for the up-front investment, and continuing to push for strategic use of HIT even in lean budgetary times.

States can leverage available assets to further an HIT effort. Where possible, states can build and expand on their existing systems, including Medicaid Management Information Systems (MMIS), immunization registries, and even paper-based records that can be scanned to become electronic. States can also structure their financing policies to support HIT initiatives, for example, by providing incentive payments or adequately reimbursing services such as telemedicine visits. Further, states can benefit from other states' experiences, not only by sharing ideas, but by using and sharing open source tools.

Strong leadership at all levels of government, across agencies, and among both private and public sectors, is necessary to get Medicaid and SCHIP HIT efforts off the ground. Profiled

states highlighted the importance of engaging key leaders and policymakers and involving all stakeholders from the early stages, including private and public sector perspectives and those that represent children's specific interests. They also pointed to the need to establish reasonable expectations with realistic timelines and to assure that staffing levels are sufficient to meet the demands of a new HIT effort. Finally, it was noted that HIT efforts can be deployed in phases as a way of rolling out an effort at a manageable speed.

States should address the unique privacy needs of children as they design their HIT effort.

In some cases, states may need to evaluate and modify state law to remove any outmoded or inconsistent barriers to secure data exchange. To assure privacy protections and program components meet patient needs, it is also important to involve patients, including parents, from the beginning of designing an initiative and to educate parents and other patients about the potential benefits of the HIT effort as well as their rights and protections.

Role of Federal Leadership and Support

The federal government has an important role to play in facilitating state HIT efforts, as demonstrated by the tremendous boost that Medicaid Transformation Grants gave to technology innovation over the past two years. States pointed to the flexible nature of these funds as being key to supporting recent HIT innovations. Additional flexible federal funding would likely spur continued action and innovation in this area. Enhanced federal match funding is another effective way to encourage state activity—enhanced funding for MMIS systems gave many states the impetus to renovate those systems. HIT activity could also be supported by clarified federal law and guidance that helps states use funding from other federal agencies to support HIT in Medicaid and SCHIP and increased federal support for evaluation of state HIT activity. Finally, continued enforcement and clarification of patient privacy laws could help assure that states incorporate consistent privacy protection measures into their HIT efforts.

Role of Private Leadership and Support

Cooperation between the private and public sectors is key to the success of state HIT efforts. Private partners include foundations, consumer advocates, providers, plans, and vendors, all of whom have skills and resources that can help move an HIT effort forward. Specifically, state experience has demonstrated that private partners can: help states fund their HIT efforts; participate in public HIT efforts as a central partner; create usable software and other products that can help Medicaid and SCHIP programs; and support evaluation of HIT innovations.

Conclusion

States are utilizing a wide array of innovative HIT efforts in their Medicaid and SCHIP programs to: improve their ability to reach, enroll, and retain eligible children; improve the quality of care delivered to children through the programs; communicate with families in new ways; and evaluate and modernize their programs. Federal leadership, including funding, is key to supporting state HIT efforts, but state leaders are pursuing a range of strategies to overcome financing and other challenges in order to implement and sustain new HIT innovations.

INTRODUCTION

Health information technology (HIT)¹ offers the opportunity to rethink the delivery of health care and has the potential to improve access, quality, effectiveness of services, and efficiency. Beyond electronic medical records, HIT includes information and communications technologies that perform administrative functions, provide specific clinical applications, and connect the many entities and people that are involved in supporting a child's healthy development.

This *E-Health Snapshot* is the first overview of state HIT activity through the lens of children—examining the HIT advances being used to meet the unique health needs of children served by Medicaid and SCHIP and laying out the lessons learned through these public HIT efforts. The Snapshot spotlights a range of promising efforts by states to improve health care delivery to children by using HIT to improve the reach and effectiveness of their Medicaid and SCHIP programs. Where available, it provides data on the measurable impacts of these early efforts, results that are quite promising in terms of improving access, coordination, case management, and administrative efficiency. The Snapshot also provides a roadmap for moving ahead that is based on the advice of leaders in states who have experimented with these new tools.

While HIT will not be able to resolve all of the challenges faced today in the delivery of health care, it offers states potentially valuable new tools to address persistent challenges in child health care. This Snapshot is intended to introduce policy-makers, program planners, and other key stakeholders to the variety of HIT opportunities to improve Medicaid and SCHIP. It also highlights the key supportive role that is required of public, corporate and philanthropic stakeholders at the national, state, and local levels to develop and foster Medicaid and SCHIP HIT efforts.

CONTEXT, SCOPE, AND METHODOLOGY

Many of the HIT solutions that states are developing for their Medicaid and SCHIP programs are still at an early stage. A significant amount of innovation was supported by Medicaid Transformation Grants which provided \$150 million in federal dollars to 35 states, Washington, DC, and Puerto Rico to fund innovative systems to improve Medicaid efficiency, cost effectiveness, and quality of care.² Since these Grants were just awarded in 2007, many of the resulting efforts are still in their infancy.

This Snapshot is not an exhaustive summary of all of the exciting activity in the field, but rather a sampling of efforts that were selected based on extensive interviews with national experts because they offer state Medicaid and SCHIP programs a range of replicable, promising approaches to improve children's health and address immediate program challenges while also providing a platform for addressing longer-term challenges.

HOW HIT CAN HELP IMPROVE MEDICAID AND SCHIP FOR CHILDREN

Medicaid and SCHIP cover over 34 million children in the United States (over a quarter of all children and more than 61% of children below the poverty line).³ These numbers are expected to rise due to the economic downturn.⁴ Approximately 50% of Medicaid recipients are children⁵ and nearly all SCHIP recipients are children. Thus, an investment in Medicaid and SCHIP HIT is a de-facto investment in children. Additionally, 5.5 million children are eligible for Medicaid or SCHIP but remain uninsured,⁶ leaving them at risk. An investment in technology that improves enrollment in and renewal of coverage for these programs has the potential to greatly reduce the number of uninsured children and increase their likelihood of receiving necessary care.

Medicaid and SCHIP HIT can also improve the quality of care for the large numbers of children enrolled in the programs. Effective communication between patients/families and their physicians, as well as among health care professionals, has been demonstrated to improve the timeliness and effectiveness of children's care and to increase parent satisfaction.⁷ HIT (whether in the form of electronic health records, remote monitoring, or other forms) can improve the quality of communication between families and physicians as well as between providers serving those families.⁸ Further, HIT has the potential to improve the ability to monitor children's health care needs and the care they are receiving, ensure that they receive all recommended preventive care, facilitate chronic care management, evaluate the effectiveness of their care, and provide families with key health information for their children—all functions that can greatly improve children's well-being.⁹ At the same time, HIT also allows states to conduct research at a population level to determine what practices lead to the optimal growth and development of children, providing an evidence basis for future program planning and development.

To fully realize the potential of HIT to improve children's health, that HIT must be designed for them. While some HIT systems designed for adults may fit children well, that is not true for all HIT. For example, for an electronic health record to be useful to a pediatric provider and to a family, it must include certain pediatric-specific functions, such as immunization management, growth tracking, and medication dosing by body weight/age and other characteristics, and it must incorporate pediatric knowledge into its clinical decision support tools.¹⁰ Consumer-oriented Web education efforts must provide information on issues that affect children, such as quality comparison of children's hospitals and materials that address pediatric conditions and illnesses. Certain populations of children require an even more particularized approach, such as foster children, children with behavioral health problems, emancipated youth, pregnant teens, and others. And, finally, HIT for children needs to address privacy concerns that vary by age and status and that incorporate parents and caregivers into the care team.¹¹

OVERVIEW OF STATE MEDICAID AND SCHIP HIT EFFORTS

The following sections provide a look at the array of technology approaches that Medicaid and SCHIP programs are deploying in an effort to improve their ability to serve children. Often, they benefit other populations as well. These include efforts around outreach, enrollment, and renewal practices; quality improvement; connections and communications with families; and program evaluation, improvement, and modernization. (For a chart of all the efforts profiled in this Snapshot, see Appendix A.)

HIT in Outreach, Enrollment, and Renewal Practices

HIT offers opportunities for states to reach eligible but uninsured children, enroll them, and maintain continuous coverage more simply, efficiently, and effectively. One of the first ways states began to utilize HIT in Medicaid and SCHIP programs was aimed at simplifying application, enrollment, and renewal practices. A number of states now provide online applications¹² and use the Internet to convey program and eligibility information to families. (See [E-Health Snapshot: Harnessing Technology to Improve Medicaid and SCHIP Enrollment and Retention Practices](#), for an overview of state efforts in this area.) States understand that HIT can reduce many administrative burdens—for agencies and families alike—so there is tremendous interest in all HIT administrative solutions. Early results find e-enrollment and retention efforts paying off in more appropriate care settings for children, reduction of the number of children dropping out of coverage only to re-enroll a few months later (churning), and administrative savings.

New Outreach Opportunities and Methods

- As part of its Medicaid Transformation Grant, **Oklahoma** is building an online Medicaid enrollment Web site and providing computer kiosks at selected community locations, such as some Food Stamp offices, hospitals, and large federally qualified health centers (FQHCs). Ultimately, the online application will be linked to a client information system that will coordinate enrollment, claims, and encounter data to track the outcomes of services provided and will link with other programs, such as family planning and WIC.¹³
- **South Carolina** ran an outreach campaign that used its integrated data system (a multi-agency data warehouse discussed on page 14) to map the addresses of uninsured children who were using emergency rooms (ER), which then allowed the Medicaid and SCHIP programs to target outreach and advertising to “hot spots” where these uninsured children lived. The campaign also provided on-site enrollment assistance in targeted ERs. An evaluation of the one-time outreach effort found that uninsured children used the ERs 30% less the following year.¹⁴
- **Florida** Medicaid has just begun to run periodic data checks in its integrated data system to locate Food Stamp cases that contain children who are not enrolled in Medicaid. The Medicaid agency then follows up by sending those households a letter informing them that their children may be eligible for health coverage and how to apply online or in person. Results from the two data matches have not yet been compiled.¹⁵

Simplifications in Application, Enrollment, and Renewal Processes

- **Pennsylvania** has an online application system, COMPASS, that now provides a bridge between Medicaid, SCHIP, and adultBasic (the state’s program for low-income, uninsured adults). This “Health Care Handshake” automatically transfers eligibility information between enrollment systems to assist in the enrollment process. This transfer occurs not only at the point of application but also when an enrollee loses eligibility in one system but may qualify for benefits administered by another. As part of the Handshake, the losing agency provides a fully populated application to the gaining agency with all the information needed

to make an eligibility determination, requiring no further action by the individual or family. Coverage is seamless, as the transaction takes seconds and the individual is enrolled in the new program at the earliest date possible. The pilot that tested the program before it went statewide demonstrated a significant increase in referrals between the program agencies.¹⁶

- **Washington** is one of a number of states¹⁷ that simplifies its Medicaid renewal process for children by using the information families routinely give to update or recertify Food Stamps or cash assistance to make a Medicaid redetermination. That information is electronically fed into an eligibility determination for Medicaid and the period of eligibility for health coverage is automatically extended when that information shows children to remain eligible.¹⁸
- **Utah** is launching a new eligibility system (Electronic Resource and Eligibility Product – or, eREP) in the fall of 2008 which will automate the eligibility determination for multiple programs, using data obtained through its data brokering system (eFIND).¹⁹ eREP will allow families to access the system through an online application that provides an integrated front-end interface for multiple programs. It also has a document imaging system that allows all stored documents to be called up through a case number. Already, through eFIND, the state estimates a yearly administrative savings of \$2.1 million.²⁰
- **Massachusetts** is one of a number of states using data sharing to increase program integrity and simplify its ability to meet the new eligibility determination requirements imposed by the federal government through the Deficit Reduction Act (DRA) of 2005, which require U.S. citizens to provide documentation to prove their citizenship.²¹ With its Medicaid Transformation Grant, it is building the capacity to instantly certify and/or verify birth records within the state and across state lines through the Electronic Verification of Vital Events (EVVE) system.²² This data exchange is being done to help prevent enrollment denials and delays as well as the disenrollment of eligible persons due to the new documentation requirements.²³

HIT to Promote Quality of Care for Children in Medicaid and SCHIP

HIT allows providers to improve quality of care for children through data sharing and data management.²⁴ Increasingly, states are exploring ways to accomplish secure data exchange in order to provide better case management, promote preventive care, improve coordination among providers, prevent duplication of services, develop an evidence-basis for clinical decision-making, and identify the best course of treatment.²⁵ Results from some profiled efforts find increased EPSDT screenings, immunization rates, referrals to case management, and assessments to guide care delivery, as well as reduced institutional placement, ER use, and acute medical visits.

State governors recently stated that their two highest e-health priorities are development of electronic health information exchange and of policies that support those exchanges.²⁶ This interest is being fueled by projected cost-savings²⁷ and, in part, by the private sector, which is focusing tremendous resources on developing electronic records systems. However, state Medicaid agencies are participating in the health information exchange effort as strong partners and sometimes as the drivers.²⁸ The system must ultimately include data from the public and private sector in order to be of greatest utility. Medicaid and SCHIP agencies have tremendous reserves of data—claims data, immunization registries, and more—that can be reorganized,

looked at through new lenses, and used to improve the care of children. And, these public agencies are increasingly challenging the traditional barriers between agencies that prevented collaboration and coordination in order to provide a more child-centered care.

Increased Data Sharing Across Agencies and Among Providers

- The Medicaid Information Interchange in **Arkansas** is a Web-based system that uses claims data to track emergency room, specialist, and EPSDT service utilization for Medicaid managed care enrollees. The system gives registered Medicaid providers electronic access to individual and caseload-level data. With this data, the state is able to promote preventive care by providing higher reimbursement rates to providers with higher EPSDT screening rates. In its first year, over half of primary care providers began to utilize the system and the state experienced an 8% increase in EPSDT screenings.²⁹
- **Rhode Island** created a robust electronic child health information system for every child in the state, including those enrolled in Medicaid and SCHIP. Called KIDSNET, the system integrates data from ten databases (including the newborn developmental risk screening program database, WIC, vital records, and others) and allows authorized users serving children (doctors, school nurses, and others) to access the data that is relevant to the care they are providing, either at an individual or aggregate level. Though the Medicaid database is not yet linked to KIDSNET, such a linkage is currently being planned. Until then, Medicaid providers can use KIDSNET to access crucial information from the ten databases currently included. In one health center that has built KIDSNET into its workflow, 95% of children are up-to-date on immunizations, as compared to a statewide average of 72%.³⁰
- **New Jersey** is embarking on something very similar to KIDSNET, supported by a Medicaid Transformation Grant. The New Jersey Electronic Medical Information for Children (NJ-MedIC) project will connect the currently siloed immunization and lead screening registries into a clinical record system that can later be expanded to include real-time information from eligibility, demographic, and EPSDT databases. The system is intended to give providers comprehensive information that will allow for better care and compliance with recommended protocols.³¹
- **Hawaii** is also using one of its Medicaid Transformation Grants to design an EPSDT-centered, Web-accessible registry. The registry will allow for electronic submission of EPSDT reporting forms and give providers real-time access to information about a child's preventive care history. In addition, data will be used to provide feedback reports to providers about their EPSDT performance. The project aims to increase the performance of the EPSDT program through better coordination of information as well as using information to target areas for outreach and improvement. This effort is being coordinated with Hawaii's other Transformation Grant to develop a low-cost open source³² electronic health record using technology created by the U.S. Veterans Administration and the Indian Health Service.³³
- **Wisconsin** has developed an "ED Linking System" for its largest city, Milwaukee, supported by a Medicaid Transformation Grant. The system provides emergency department (ED) physicians with on-site, on-demand patient medical history to assist them in delivering more appropriate and cost-effective treatment. The system also provides anonymized data to state

and local health departments to track service utilization. The ED Linking System contains real-time patient admissions, discharge, and transfer data from ten EDs and many hospital-affiliated outpatient clinics. It will soon incorporate historical data from the Medicaid claims database, including diagnoses, pharmaceutical, and case management information. The system also includes notes entered by the ED clinician through a set of drop-down options (such as “the patient was referred to child protective services”). Early feedback indicates that the data sharing has allowed ED clinicians to identify patients repeatedly using ED services and refer them for case management and medical homes.³⁴

Facilitating Providers’ Ability to Evaluate Health Needs, Respond with Appropriate Services, and Develop an Evidence Base for Care

- In **Indiana**, an interagency team developed common objectives in order to redesign a fragmented mental health assessment process. In response, the state has deployed a common assessment tool called CANS (Child and Adolescent Needs and Strength). CANS was developed by the Buddin Praed Foundation, a private foundation that provides the tool at no cost to interested states. The tool aims to increase the suitability of the mental health services provided to children across agencies by allowing providers to use more objective standards to assess needs and make treatment decisions at all levels. The tool is supported by an interactive Web site that has begun collecting assessment information and will allow the services and outcomes to be evaluated over time. The system will be able to produce individual as well as aggregate reports on assessments, outcomes, and trends. In its first year of operation in Indiana, 30,000 children and youth were assessed using CANS, finding the need for three times the available capacity for wrap-around services for youth with complex needs and their families—a figure which is being factored into program planning and budget requests.³⁵
- **New Mexico** has received a Medicaid Transformation Grant to support the development of statewide e-prescribing (eRx) with the goal of reducing costs and medication errors by providing physicians with an accurate medication history for their patients. To date, New Mexico’s Medicaid agency has made necessary systems modifications to enable eRx capabilities, including electronic response to eligibility, formulary, and medication history transactions. It is working in coalition with the state’s other large payers to develop an eRx pilot and commit funding to support its deployment based on relative share of covered lives. The coalition pilot will launch with 100 physicians and sponsor software implementation fees. Medicaid will implement a separate, similar pilot of 50 to 80 physicians with a focus on rural providers. Each program will be structured to demonstrate the capacity for eRx to provide administrative and clinical benefit to the provider and client populations.³⁶
- **Utah** Medicaid has partnered with the University of Utah to use Medicaid Management Information System (MMIS)³⁷ claims data to improve Medicaid Retrospective Drug Utilization Review. Computerized algorithms were developed to identify Medicaid beneficiaries who appeared to have suboptimal patterns of medication use. The most recent evaluation looked at 2 years of data from Medicaid beneficiaries with targeted diseases, including 3,500 children with persistent asthma. Approximately 480 of them were flagged as having a potential drug therapy problem. These data were then used to review case

management and drug interventions and provide a set of evidence-based recommendations specific to the patient's condition.³⁸

Tools to Serve Specific Vulnerable Pediatric Populations

- **Texas** recently deployed a secure, Web-based electronic health record, known as the Health Passport, using Medicaid Transformation Grant funds. It serves about 30,000 children in foster care and facilitates information sharing and medical services coordination among the child's health care providers, the Department of Family and Protective Services staff, and foster parents. The Passport allows immediate access to basic health information so that care is less likely to be disrupted if a child moves to a new placement. Data available for viewing in the Passport includes: information from medical, dental, and behavioral health claims; information from pharmacy claims for filled prescriptions; immunization records from the State's immunization registry; behavioral health and medical assessment forms; laboratory test results from selected laboratories; and allergies and vital signs, if entered by the healthcare provider. Future plans for the Passport include developing an interoperability component to allow individual providers to share health information from their existing electronic medical record system. The Health Passport gives caregivers a new opportunity to evaluate the health needs, coordinate care, and reduce duplicative costs for a highly mobile, highly vulnerable population of children.³⁹
- **Wrap Around Milwaukee**, a county-operated Medicaid managed care entity in **Wisconsin**, has strengthened its ability to provide "wrap-around" services⁴⁰ for children at risk of institutional placement (through foster care or juvenile justice) by developing software that makes that task significantly easier. Its Internet-based system allows 230 agencies providing 70 services to link to an electronic record that keeps up-to-date information on eligibility, demographics, services received, needs, plans of care, crisis plans, progress notes, and court records. The system delivers a wide range of information to a broad set of providers—including schools, courts, mental health providers, and others—to help them deliver appropriate and coordinated care for these children. The coordinated services are credited with reducing the daily average of children in long-term residential placement by 60% (from 364 per day to fewer than 140 per day). Currently only minimal information about physical health care is placed in the record by the child's case manager, but the program is exploring ways to connect this system to physical health care providers.⁴¹
- As part of its statewide Blueprint for Health initiative (a public/private partnership that includes Medicaid and SCHIP), **Vermont** is well into developing a Web-based clinical information system to manage and evaluate care for the chronically ill. The first stage of deployment will focus on adults with diabetes and has amassed baseline data on 1,100 patients. The information system is the fulcrum of the state's medical home pilot initiative and will assist local multidisciplinary teams in their work to provide care coordination and health management guidance regardless of diagnosis or insurance. So far, participants report statistically significant decreases in ER and acute medical visits following the completion of a six-week-long self-management class. Ultimately, the self-management program will be enhanced with electronic capabilities through the clinical information system. The Blueprint for Health was focused on adults. Pediatric functions will be folded into the information system later and the state has chosen a health risk assessment and management tool that will help it address obesity and asthma for children and adults in the state.⁴²

Improving Connections and Communications with Families through HIT

To improve care, families and providers need access to accurate information from across services and they need effective systems for sharing this information. Many states are beginning to use HIT to provide services to families in new ways, especially through the use of telemedicine and telehealth.⁴³ HIT is also helping states to educate families about their health and health needs and provide families new resources to better track and manage their health conditions. The enhanced communications used by the states profiled in this Snapshot have already shown themselves capable of improving the use of case management and health education resources as well as increasing access to needed specialty services.

HIT to Promote Health Education and Consumer Involvement

- **Vermont's** Department of Health has created a comprehensive community health Web resource for parents, patients, and the public with information about chronic disease, infectious and other diseases, health maintenance, and mental health and substance abuse as well as other concerns. In addition to its own educational material, the site provides links to printed or Web resources as well as contact information for programs and community agencies addressing the particular disease or health concern. Currently, planning is underway to utilize this Web resource as a means for providing disease management tools and other functions envisioned by the Blueprint for Health.⁴⁴
- **Wyoming** is in the process of developing a Total Health Record. As the first phase of this effort, the Medicaid agency is promoting patient education through a “pay for participation” effort that allows providers to bill for the time involved in educating patients about wellness, prevention, and disease management. Generic patient education documents and billing assistance materials are being distributed electronically to help providers take on this role. Pediatricians are the primary users of this system. As the state rolls out this first piece of the Total Health Record, provider offices are learning about the upcoming electronic health record and medical home component of this HIT effort. Following the implementation of the pay for participation program in 2007, pediatricians are making 65% more referrals to the state's case management and health coaching program.⁴⁵

New Methods to Reach Patients and Help Them Manage Their Health

- **Oregon** is using its Medicaid Transformation Grant to develop the Health Record Bank of Oregon (HRB). The effort will create a personal health record archive and is being designed with input from the public through public meetings. The system is intended to enhance patient engagement in their own care, by giving families control over their health record, as well as improve the effectiveness and efficiency of each visit to a Medicaid provider. The HRB is being designed to complement the replacement MMIS system. In Oregon, the case was made for the investment in HIT by a state-commissioned study which estimated the potential health expenditure savings of \$1.7 billion per year from widespread adoption of comprehensive HIT systems, of which the HRB is one piece.⁴⁶
- **California's** SCHIP program, Healthy Families, has advanced telemedicine in the state through the Rural Health Demonstration Projects (RHDP), legislatively authorized projects

designed to alleviate unique problems of access to health care in rural areas.⁴⁷ Since 1999, this funding has been used to develop and manage a statewide telemedicine network. The network currently supports 65 telemedicine sites in 28 California counties and was used in nearly 2,000 patient encounters in 2006, including, but not limited to, Healthy Families enrollee encounters. Psychiatry and dermatology have accounted for the majority of specialty encounters.⁴⁸

HIT and Program Evaluation, Improvement, and Modernization

A number of states have looked beyond the immediate administrative and delivery challenges that might be eased by HIT and attempted to redesign their systems at the architectural level. By taking this on, they are building an infrastructure that can benefit multiple state agencies and that can be adapted to uncertain program needs of the future. Of course, systems change at the enterprise level can be daunting, but strong leadership and coherent, overseeing vision from a key leader is making it happen in some states.

- **South Carolina** has created a statistical data warehouse that includes extensive de-identified data from agencies across the spectrum of government as well as some private organizations such as hospitals and clinics. Through this cooperative effort, the state is able to evaluate the broad experience of individuals receiving public sector services—including health, social services, mental health, alcohol and drug treatment, education, criminal justice, elderly services, housing, and public safety—at a population level. Because the data are geo-coded, the system is able to take de-identified individual-level data and examine it across silos at many levels (e.g., school districts, health practices, and legislative districts) as well as in many ways (e.g., determining the prevalence of obesity among Food Stamp participants, looking at the impact of health insurance coverage on school performance) and design program improvements. For instance, an examination of children receiving services across all agencies identified and mapped those with special health care needs. The map demonstrated that the two counties most noted for environmental pollution had the highest rate of children with special health care needs. In response, the State's Medicaid agency began a public education campaign, initiated preventive health care programs, and conducted environmental studies.⁴⁹
- **Arizona** is in the process of creating a single, statewide, comprehensive, Web-based Medicaid health information network that will provide an infrastructure (the components needed to deliver IT services) for all health providers, not just those serving the Medicaid population. **Alabama** is also constructing an interoperable patient data hub that will serve as the foundation for a statewide electronic health system for all stakeholders. Both efforts have received support from a Medicaid Transformation Grant, but were well underway when that source of support was obtained. Both are linking existing legacy data systems through Web tools and middleware (the programming that mediates between two existing systems), thus leveraging the value of what they already have in place. Both systems are including an electronic health record as part of the overhaul—but not as its exclusive goal—and are building in data-driven, outcome-focused quality improvement and clinical decision support tools. And, Arizona is working to integrate its online application with the electronic health record and move the state toward a data-driven enrollment process.⁵⁰

STATE STRATEGIES FOR MOVING FORWARD WITH HIT

As this Snapshot makes clear, Medicaid and SCHIP agencies are taking an array of technology approaches in an effort to serve children and other beneficiaries better. However, states face a number of challenges that must be examined and addressed before they can move forward with any new technology effort, specifically: obtaining funding, creating successful governing structures, leveraging existing assets, and protecting consumer interests. This section helps states think through these challenges by synthesizing the advice of state programs and national experts interviewed for this Snapshot.

Funding

One of the most significant challenges Medicaid and SCHIP agencies face in pursuing HIT efforts is obtaining necessary funding. Up-front costs can be large, even where the technology may ultimately lead to significant cost-savings. Obtaining sustainable funding can present an even greater hurdle. Some successful strategies states have used to identify, obtain, and maintain funding for Medicaid and SCHIP HIT efforts include the following:

- *Utilize available Medicaid and SCHIP funding streams.* Many of the program examples in this Snapshot received initial start-up funding through Medicaid Transformation Grants, which were uniquely flexible. That particular set of grants is fully expended. Separate from these grants, states can receive significant, on-going funding for HIT through enhanced MMIS and standard 50% matching Medicaid/SCHIP administrative funds.⁵¹ These sources of funds will continue to be the foundation of federal support for HIT in Medicaid and SCHIP programs.
- *Investigate innovative funding sources.* States can gain flexibility and overcome the lag time associated with MMIS planning documents and approvals by reaching beyond Medicaid funding to diversify their funding portfolio. Some states have successfully identified innovative public funding sources; some have benefited more from corporate philanthropic support; while others have used alternative funding models and partnership options (see Appendix A).⁵²
- *Identify potential cost-savings of the HIT.* In these tight budget times, governors appear to be pushing for HIT projects “because of the belt tightening rather than in spite of it.”⁵³ Thus, building the case for HIT investment with a careful analysis of the potential long-term cost-savings can be useful for garnering project support, although cost saving data is still limited due to the early stage of many of these projects.⁵⁴
- *Keep pushing forward, even in lean times.* This is a challenging fiscal time for states, but states will always face financial challenges that can derail planning, expenditures, and major business process changes such as those required for HIT. As the administrators of New Jersey’s EPSDT-focused clinical record emphasized: states cannot give up. Leaders of these HIT efforts have to “keep putting the message out there about why this is important,” even when the financial conditions seem daunting. Program leaders should emphasize the importance of investment in Medicaid and SCHIP HIT to stay current with private coverage practices, to continue to improve quality and outcomes, and to eliminate costly programmatic inefficiencies.

Governance

Interviewees emphasized the critical importance and necessity of strong leadership at all levels of government, across agencies, and between both private and public sectors to get Medicaid and SCHIP HIT efforts off the ground and build them into robust, sustainable programs. They suggested some of the following actions for garnering necessary leadership and buy-in to develop new HIT efforts.

- *Engage key officials and policymakers to lead the effort.* Major HIT efforts being driven by Medicaid and SCHIP agencies reflect the strong commitment and vision of key leaders in those states. Strong leadership enables the necessary creativity and innovation that is required to overcome existing barriers to collaboration. For instance, in states like Arizona and Vermont, the backing of the Governor, the Legislature, and agency Directors has led to comprehensive health care reform with IT as a centerpiece of that reform. Support from key leaders can help stakeholders overcome concerns about the up-front expense and frame the effort as a long-term investment. In addition, involvement by high-level state leaders will encourage the involvement of other important stakeholders who should be engaged in the project from the beginning.
- *Involve all stakeholders from the early stages.* The effectiveness of an HIT project that attempts to do business in an innovative manner depends on the ability of multiple parties from different agencies to build consensus and work together. These agencies need to define common goals, work toward interoperable systems, standardize data, and jointly fund the HIT effort in order for it to be successful.⁵⁵ The earlier each of the interested parties is at the table, the easier it will be to build their trust, get their buy-in, and obtain valuable feedback. Public and private sector participants should be brought in at an early stage, as well as consumer advocates, technology experts, and provider groups. Pediatric-focused stakeholders must play a central role to ensure that children's needs are met. Involvement of all these parties can pave the way through the challenges that the effort will encounter along the way. It also makes it more likely that the resulting HIT meets users' needs—a result that is crucial to the ultimate success of the effort.
- *Establish reasonable expectations.* HIT efforts take a long time and require careful, deliberate planning. Collaboration requires even more time. Out of that added time investment, though, comes a better system that incorporates multiple perspectives and the programmatic goals of more of the agencies serving children, according to leaders of Vermont's Web-based clinical information system effort. This type of work involves several culture shifts on the part of state agencies: collaboration, data sharing, working with private partners, new ways of doing work, greater accountability, and focusing on the patient needs rather than the program needs. All of these shifts are valuable, but culture shifts take longer than the time it takes to find the right piece of technology.
- *Deploy the effort incrementally, but design it as an integrated whole.* HIT planners must be aware that it is difficult to meet the goals of all stakeholders up front; but, well-designed HIT is capable of being modified, and expanded upon—and, it is possible to phase in the features that serve other program goals at a later time. Many states in this study are doing just that. States can focus on subpopulations (such as children or even particular subgroups of children) as a way of rolling out the effort at a manageable speed. That approach allows a

program to focus on the subpopulation that may have the most to gain, while allowing for system evaluation and improvement before going larger scale. Or, states can focus on an electronic “gateway” that is the first step toward building larger-scale electronic initiatives, such as e-prescribing.⁵⁶

- *Ensure that resources are in place to address new demands presented by HIT.* With HIT advancement comes a different set of program work needs. States must be flexible because staff and other resource needs will evolve as HIT changes. For instance, staffing can pose a real challenge in state HIT efforts.⁵⁷ States need a stable workforce of qualified employees to avoid poor quality and delayed data, unresolvable errors, and other compromises to the effectiveness of the effort. In order to avoid problems on this front, states will need to have adequate resources in place to meet this demand. In another example, as more providers move to electronic health records, Medicaid and SCHIP programs reap a great benefit, since the technology will eliminate some of the need for data entry and will automate some of the administrative tasks. On the down side, though, as more providers use electronic records systems from multiple vendors, there will be an increase in work to resolve data compatibility issues and associated errors. To minimize problems, state programs are using education, planning, and phased roll-outs and encouraging adoption of interoperable, compatible systems through grants, incentives and technical assistance.

Leveraging Existing Resources

States have a lot to gain from working with other states and learning from their experience. They can also benefit by leveraging their internal assets (such as legacy systems and other existing technology). Following are several ways states can utilize existing resources and assets to further their HIT efforts.

- *Learn from other states.* States need not operate in a vacuum. They can learn from one another through useful publications⁵⁸ as well as Web-based resources and collaborative efforts. (See Appendix B.) Beyond sharing ideas and lessons learned, states can actually benefit from one another’s technology and/or use open source tools—especially when the state has the in-house capacity to modify that technology to meet its own needs.⁵⁹
- *Use existing building blocks where possible and construct advances so they are building blocks for future development.* Medicaid and SCHIP programs have strong building blocks for a more modern, improved HIT system. Recent technology advances allow states to bring their existing IT systems to new functionality by allowing formerly siloed systems to communicate with one another and use the data in new ways.⁶⁰

At a minimum, the data that exists in MMIS systems are very rich and provide states with years of information about recipients’ health and care that can be put to new use. This is seen in many of the examples in this Snapshot, with MMIS data being used to form the backbone of an electronic health record (as in Wyoming and Texas), being evaluated to determine population health characteristics (as in South Carolina), and being used to design health care treatment protocols and interventions (as in Utah). Immunization registries can be expanded into robust electronic records that are focused specifically on children (as in New Jersey and Rhode Island). Paper-based foster care records can now be scanned, enhanced, and made more useful by becoming electronic (as has been done in Milwaukee).

However, these assets and datasets may come with some limitations that should be carefully considered and addressed in HIT system design, such as the fact that MMIS data is often delayed by months and the fact that low retention in Medicaid can make it hard to obtain longitudinal data or follow a particular case over time.

- *Utilize financial incentives to drive positive change.* States can promote the adoption of HIT in Medicaid and SCHIP by establishing supportive financing policies. For instance, while telemedicine offers tremendous promise to reach children in need of care who might otherwise go without, it can only gain a foothold when it is adequately reimbursed as a service.⁶¹ States can provide financial support through reimbursement changes and incentives payments (such as increasing reimbursement for physicians with higher EPSDT screening rates, as in Arkansas) to assist providers in taking up new information technologies like telemedicine or electronic health records, which have an up-front expense and a learning curve. Furthermore, states can develop funding policies that address the unique needs of their state, whether the challenges to HIT adoption result from being largely rural, from being a large state with organizational complexity, or any other particularity.

States can also require their intermediaries to assist in the development and adoption of beneficial HIT efforts. For example, Arizona requires its Medicaid managed care plans to participate in electronic exchanges and to provide electronic records, Utah requires its Medicaid and SCHIP managed care entities to report information in a manner that is compatible with fee-for-service MMIS data so the state can use the data, and New York requires its electronic health information networks to exchange critical data in return for receiving Medicaid data.

- *Build the system with an eye toward the future.* All incremental HIT investments must be made with an eye toward a future system that achieves the necessary business functioning for the state enterprise as a whole. To that end, to remain useful over time, HIT solutions should be scalable and capable of being adapted to evolving federal standards and different demands and functions in the future. For example, as many states move forward with electronic medical records, they should be mindful of wider benefits that can be incorporated into the effort, such as linkages and improvements to their eligibility systems (as are being planned in Arizona).

Patient Privacy and Consumer Needs

Privacy is of particular concern to children and families because misused or inaccurate information can have serious implications for school, court proceedings, and family relationships.⁶² Appropriate privacy practices for children and families can be particularly complex because children have rights that vary with age and parents play a role in their care—factors that affect consent and control over a child’s health information. The success of HIT requires that close attention be paid to protecting privacy and maintaining data security. Appropriate health care depends on having trustworthy, accurate information and open communication with a health provider.⁶³ Consumer confidence in the confidentiality of their information is crucial to meeting those goals. Interviewees suggested some of the following steps to help ensure patient protections and consumer involvement.

- *Address the unique privacy needs of children in a manner that also supports program goals.* As states design their HIT efforts, they should recognize the particular sensitivity of health data as it relates to children—particularly regarding behavioral health data. These sensitivities need not prohibit all data sharing, but they do require that a higher standard of protection be met. Medicaid and SCHIP programs should try to solve privacy and security issues in a way that works for both the programs and its beneficiaries. That balance will require that states dedicate significant time to the issue—more time than they envision, according to the experience of Milwaukee’s ED Linking System.
- *Evaluate and modify state law.* States often mention privacy and security as a barrier to HIT. The patchwork of federal, state, and agency rules can make it difficult for states to move forward. State law can be outmoded, pre-dating modern technology or not really addressing the issues facing programs today.⁶⁴ To proceed with HIT that can really benefit children, states can carefully evaluate what is possible and clarify and update their law and policy. Analyses should focus on identifying the risks and benefits of specific information sharing efforts, the major impediments to appropriate information sharing, and the policies needed to promote appropriate information sharing while protecting privacy and security.
- *Involve consumers from the beginning.* Privacy protections and program components that meet the needs of the consumer must be built in from the beginning. To do that effectively, states should include consumer advocates in their HIT efforts as key members of stakeholder groups. Consumers can help Medicaid and SCHIP programs set objectives, design the project, and establish a manner for evaluating outcomes. As part of this effort, the unique position of children must be addressed at the outset.
- *Educate consumers.* In the interests of making sure that HIT provides the greatest benefit to Medicaid and SCHIP recipients, states can provide families with relevant consumer education materials, including information about rights and protections as well as the potential benefits that can be realized from participating in the HIT effort. These should address issues that are particular to children and be made available in multiple languages at a literacy level that families can understand.

ROLE OF FEDERAL LEADERSHIP AND SUPPORT

The federal government has an important role to play in facilitating state Medicaid and SCHIP HIT efforts, as has been demonstrated by the tremendous boost that Medicaid Transformation Grants have given to Medicaid program technology innovation in the past two years. Following are some key ways that Medicaid and SCHIP HIT efforts can be further supported at the federal level.

- *Additional flexible funding sources.* The flexibility of the funds issued through Medicaid Transformation Grants is widely believed to have allowed for greater innovation than standard Medicaid funding. However, these funds have already been expended. Providing additional similar flexible federal funding would likely result in continued innovations and efforts. This could include flexible funding for HIT solutions that promote cross-agency coordination.

- *Simplify cross-agency efforts.* Traditionally, federal funding has been provided on a program-by-program basis that inhibits cross-agency activity. Siloed funding has led public agencies to develop siloed technology. Agencies have difficulty supporting collaborative work because the funding is tied to the agency and does not follow the individual being served.⁶⁵ Furthermore, cross-agency reporting is cumbersome. Signs of changing times are seen in such innovations as [Medicaid Information Technology Architecture](#) (MITA), which is the effort of the Centers for Medicare & Medicaid Services (CMS) to provide technical assistance to states and, ultimately, financial pressure to create interconnected IT systems that support better business functioning. Federal agencies can continue to promote coordination through changed funding rules and practices. In addition, Congress could help move this process forward by providing additional funding to help states deploy technology that makes the connections called for by MITA.
- *Enhanced match for HIT developments.* Enhanced-match Medicaid funding has been successful in inspiring technology development in Medicaid programs, where it has been available. For instance, the availability of enhanced funding for MMIS claims processing and data retrieval systems has given many states the impetus to renovate those systems.⁶⁶ But, enhanced funding is not available for all HIT efforts—for instance, those affecting eligibility systems—though these pieces of the system can radically improve program integrity as well as the reach and quality of a Medicaid and SCHIP program. Thus, expanding the availability of enhanced funding for HIT would facilitate states’ ability to pursue enterprise-wide IT system efforts.
- *Clarify the opportunities for federal funding.* Today, the rules governing Medicaid IT funding are complex and, sometimes, vague and unclear. CMS has intentionally left some openness in order to allow for the fact that this is an evolving field with ever-changing opportunities. However, this openness can sometimes inhibit state activity, since states do not want to move forward without explicit authorization and known funding sources. CMS could support state HIT activities by informing states where there is flexibility and where they have an opening to work with CMS to design a system that meets their needs.

Other federal agencies, such as the Health Resources and Services Administration (HRSA), the Agency for Health Care Research and Quality (AHRQ), and the Centers for Disease Control and Prevention (CDC), also offer funding that can support technology development by Medicaid and SCHIP agencies.⁶⁷ However, states need technical assistance and clear guidance from the agencies themselves as well as flexibility to use this funding in cross-agency work in order to realize the opportunity presented by these additional sources of funding.⁶⁸

- *Promote collaboration and support evaluation efforts.* The urge to do business as usual is strong and it takes a combination of financial incentives, law and regulation, and technical assistance to encourage the creative collaboration that is needed for a successful HIT effort. Strong leadership and vision on the part of federal efforts like MITA are making a substantial impact.⁶⁹ Other efforts encourage cross-agency efforts as well, such as the Office of the National Coordinator for Health Information Technology within the U.S. Department of Health & Human Services, which has issued guidelines for federal agencies to establish HIT that links the private and public sectors.⁷⁰ Additional policy and technical assistance from the federal level could further promote this activity and break down federal bureaucratic

impediments to state and local interagency efforts. Furthermore, increased federal support for evaluation and sharing evaluation findings would help support state HIT activity.

- *Promote privacy and consumer protections through policy and other mechanisms.* Legislation to alter federal privacy law is under active development in both houses of Congress. Pending the outcome of those debates, federal agencies can continue to clarify and enforce such measures that already exist. In addition, they can develop model legislation, guidelines, and tools to assist states in developing and evaluating HIT applications for their Medicaid and SCHIP programs. According to the General Accounting Office, such technical assistance and guidance from federal agencies is necessary to ensure that states incorporate consistent privacy protection measures into their HIT efforts.⁷¹

ROLE OF PRIVATE LEADERSHIP AND SUPPORT

States acknowledge that cooperation between the private and public sectors is essential for their HIT efforts to be successful.⁷² Such private partners include grant-making foundations, software developers and technology companies, consumer advocates, providers, plans, and vendors, all of whom have skills and resources that can move an HIT effort forward. The value of such partnerships is seen in most of the examples in this Snapshot. Specifically, experience has demonstrated the following vital role of private organizations:

- *Help states fund their HIT efforts.* Private partners can complement public efforts by providing funding that is more flexible and subject to fewer restrictions than public funding. Private funding can help Medicaid and SCHIP agencies get an effort off of the ground; it can support the testing and refinement of HIT through pilot efforts; and it can be used to offer financial incentives to speed the adoption of HIT, among other uses.⁷³ Private partners can sometimes even provide in-kind assistance, such as donated services, software, and hardware.
- *Participate in public HIT efforts as a central partner.* Private partners can assist the public effort in planning an effective linkage with private HIT efforts and private plans, many of which serve both publicly and privately insured individuals. This type of coordination and shared responsibility, seen in New Mexico's eRx effort, is essential to building a flexible, interoperable system. Furthermore, the private sector has an important role to play in helping states understand how to address the challenges they face. Toolkits, like those presented in Appendix B, and strategic assessments, such as those done in California and New York,⁷⁴ are invaluable for this purpose.
- *Continue to create usable components that can help Medicaid and SCHIP programs.* Since private sector efforts often drive innovation in the public sector, they have a tremendous role to play in effecting improvements to Medicaid/SCHIP programs. The private sector can often move faster to develop a product, demonstrate its effectiveness on a smaller scale, and then pass it into the public sphere. Success with adoption and use of a particular technology application depends on its ability to provide real value to providers and/or consumers. Private development of such applications, guided by providers and consumers, often results in user-friendly products that may later be used by Medicaid providers or deployed within Medicaid and SCHIP.

One example of a successful private effort with a public-sector application is [GetRxConnected](#), developed by a number of physician groups and other stakeholders to give providers a step-by-step approach to using eRx. Another example is the non-profit [Colorado Collaborative Care Network](#), an electronic health record developed privately with input from public agencies. As the system gains a reputation for helping physicians track care and communicate with patients backed by training and technical support, increasing numbers of physicians are using it, including Medicaid providers. As a result, the state has just begun conversations with the Network to design a purposeful integration with Medicaid.⁷⁵

Given the very large market of children with unmet health needs that can be addressed with new technologies, health and technology companies should begin to focus on special HIT applications that would help children with high prevalence health needs, such as early and periodic preventive care, dental care, and chronic conditions like asthma and obesity.

CONCLUSION

States are beginning to make significant changes to their Medicaid and SCHIP programs through the innovative use of HIT. These developments hold promise for reaching, enrolling, and retaining eligible children; improving the quality of care delivered through the programs and evaluating programmatic efforts; and providing new means for empowering families with information and tools that help them optimize the health of their children. The examples in this Snapshot find state Medicaid programs using HIT to place greater emphasis on preventive and well-child care, with early results showing that the HIT increases that care when providers actually use it. The programs profiled in this Snapshot have also begun to use HIT to educate families in new ways, to give providers timely access to necessary information, as well to coordinate the efforts of caregiver teams. Early results indicate that data sharing for such purposes is well-received and leading to more appropriate care.

Nearly every state is engaged in some form of e-health activity,⁷⁶ but not every state is focusing efforts to benefit low-income children and families. Interviews for this Snapshot and key surveys show that the bulk of activity in states is around electronic records systems. Much less focus is being paid to administrative systems improvements, though this is an area that can be coordinated with electronic records systems and has long been within the programs' HIT expertise. Federal and private support has been crucial to inspiring innovation in these public systems. However, continued momentum requires ongoing, sustainable funding.

Federal, state, and private sector leaders all have a key roles to play in ensuring that all families benefit from this evolving dynamic. Federal leaders can continue to stimulate HIT advances in Medicaid and SCHIP. State leaders can look for ways to move forward strategically, learning from other states. Private partners can encourage and assist the public efforts. As Medicaid and SCHIP programs plan and deploy new HIT, they should consider the special needs of children and the unique opportunities to advance their health and meet programmatic goals through HIT. Medicaid and SCHIP serve millions of America's children who would benefit from the opportunities presented by modern HIT.

Appendix A: Examples of State Medicaid and SCHIP HIT Activity

State	Project Name and Web Address	HIT Functionality	Implementation Status	Population Reached	Primary Start-Up Funding Source
Outreach, Enrollment, and Renewal Practices					
Florida	Targeted Outreach Practice http://www.dcf.state.fl.us/ess/	Cross-program data matching for enrollment purposes	Launched in 2008 and performed twice	Children in Food Stamps who are not enrolled in Medicaid	State funds with federal Medicaid administrative matching funds
Massachusetts	Secure Verification of Citizenship http://mass.gov/masshealth	Automation of vital records verification	First data match done Sept. 1, 2008	Medicaid applicants	Medicaid Transformation Grant
Oklahoma	Medicaid Transformation Grant http://www.okhca.org/	Online enrollment, eligibility processing, and data sharing across agencies	Planned launch October 2009 (for pregnant women and children)	All persons in or applying to Medicaid, SCHIP, the state behavioral health program, and Insure Oklahoma (for uninsured adults)	Medicaid Transformation Grant
Pennsylvania	HealthCare Handshake http://www.compass.state.pa.us	Automated eligibility referral and data exchange across agencies	Launched March 2008 in 5 counties; Launched statewide 10/13/08	All persons in or applying to Medicaid, SCHIP, and adultBASIC (for uninsured adults)	State funds with federal Medicaid and SCHIP administrative matching funds
South Carolina	Statistical Data Warehouse http://www.ors.state.sc.us/default.htm	Health Information Exchange, integrated data system, and statistical research database	In operation since 2004	Any person who received services from any of the agencies linked into the integrated data circle	Private foundation funding
Utah	Electronic Resource and Eligibility Product (eREP) http://www.utahclicks.org	Eligibility system with data brokering system allowing for automated back-end eligibility determination	Limited launch October 2008; Full launch planned for July 2009	Families that participate in Medicaid, Head Start, SCHIP, and maternal child health programs	State funds with enhanced federal matching funds (from multiple agencies)
Washington	Renewal Practice in Medicaid http://www.dshs.wa.gov/	Automated renewal through cross-program data sharing	Procedure in place since 2000	All children enrolled in Medicaid and Food Stamps and/or TANF	State funds with enhanced federal Medicaid matching funds
Promotion of Quality of Care					
Arkansas	Medicaid Information Interchange http://www.afmc.org/amii	Medicaid claims-based electronic health record	Launched Spring 2007; Currently, over 400,000 patients are in the system	Medicaid beneficiaries enrolled in managed care	State funds with federal Medicaid administrative matching funds

Appendix A: Examples of State Medicaid and SCHIP HIT Activity

State	Project Name and Web Address	HIT Functionality	Implementation Status	Population Reached	Primary Start-Up Funding Source
Promotion of Quality of Care (Continued)					
Hawaii	Medicaid Transformation Grant http://www.med-quest.us/	EPSDT-focused electronic registry	Planned launch Fall 2008	Children enrolled in Medicaid	Medicaid Transformation Grant
Indiana	Indiana Behavioral Health Assessment System, Child and Adolescent Needs and Strengths tools (CANS) http://ibhas.in.gov	Information collection and analysis to develop objective mental health assessment standards	Launched July 2007 statewide; Integrated with Medicaid January 2008; In the process of developing outcomes measures	Children and adolescents who are served by the public mental health system	Community Alternatives to Psychiatric Residential Treatment Facilities Demonstration Grant from CMS
New Jersey	New Jersey Electronic Medical Information for Children (NJ e-MedIC) http://www.state.nj.us/humanse rvices/health_care.html	Pediatric immunization and lead registry-based clinical record system with link to eligibility data	Still in development; No launch date set	Children in Medicaid and SCHIP	Medicaid Transformation Grant
New Mexico	Medicaid Transformation Grant http://www.hsd.state.nm.us/mad/madTransformationGrants.html	E-Prescribing	No launch date set for pilots, awaiting agreement between the coalition partners	Demonstration project to benefit Medicaid and other patients of about 180 participating physicians	Medicaid Transformation Grant
Rhode Island	KIDSNET http://www.health.ri.gov/family/kidsnet/index.php	Electronic child health information system	Implemented in 1997	All children in the state	Immunization funding and grant funding from the Centers for Disease Control and Prevention (CDC); State System Development Initiative from the Health Resources Admin. (HRSA)
Texas	Electronic Health Passport for Foster Care http://www.hhs.state.tx.us/medicaid/FosterCare_FAQ.shtml	Cross-agency electronic records system	Launched April 2008, statewide	All 30,000 foster children in the state	Medicaid Transformation Grant
Utah	Utah Pharmacotherapy Risk Management system (ePRM) http://www.health.utah.gov/medicaid/pharmacy/	Predictive modeling using Medicaid data to develop evidence base for pharmacotherapy	Launched April 2007	Medicaid recipients	Medicaid Transformation Grant
Vermont	Web-based Clinical Information System (WBCIS) http://healthvermont.gov/blueprint.aspx	Web-based clinical information system	WBCIS launched for pilot site use Oct. 2008	All patients in Patient Centered Medical Home practices	State funds

Appendix A: Examples of State Medicaid and SCHIP HIT Activity

State	Project Name and Web Address	HIT Functionality	Implementation Status	Population Reached	Primary Start-Up Funding Source
Wisconsin	Wisconsin Health Information Exchange ED Linking System http://www.whie.org/edlink.html	Electronic health record for emergency department use	Launched March 2008. Link to Medicaid claims system planned to launch Nov. 24, 2008	Users of Milwaukee area emergency departments	Medicaid Transformation Grant
Wisconsin	Wrap Around Milwaukee http://www.county.milwaukee.gov/WraparoundMilwaukee7851.htm	Web-based electronic record system linking data across agencies	Software in use since 1999	Milwaukee children and youth at risk of institutional placement	Grant funding from the Center for Mental Health Services
Connections and Communications with Families					
California	Rural Health Demonstration Project http://www.oshpd.ca.gov/rhpc/	Telemedicine network	Launched in 1999. Currently functioning in 65 telemedicine sites in 28 counties	Children enrolled in SCHIP, particularly those living in rural communities	State funds with enhanced federal SCHIP matching funds
Oregon	Health Record Bank of Oregon http://healthrecordbank.oregon.gov/	Personal health record system	Still in development; No launch date set	All persons enrolled in Medicaid	Medicaid Transformation Grant
Vermont	"Diseases and Prevention" Web site http://healthvermont.gov/prevention/index.aspx	Community health education Web site and education program	Web site fully revamped 2004	Universally available	Public health preparedness and bioterrorism response funding (CDC)
Wyoming	Total Health Record http://wdh.state.wy.us/	Electronic Health Record, with wellness/prevention and chronic disease management components	EHR launch planned for early 2009	All persons in Medicaid	State funds with federal Medicaid matching funds
Program Evaluation, Improvement, and Modernization					
Alabama	Together for Quality http://www.medicaid.alabama.gov/news/Transformation_home.aspx?tab=2	Electronic health information system with interoperable patient data hub	Demonstration pilot launched July 2008	Medicaid beneficiaries	Medicaid Transformation Grant
Arizona	Medicaid Health Information Exchange http://www.ahcccs.state.az.us/eHealth/	Incremental approach to a comprehensive statewide health information network	Launched Sept. 29, 2008	Medicaid beneficiaries and all persons with health records at participating organizations	Medicaid Transformation Grant; Private foundation funding for online application component
South Carolina	Statistical Data Warehouse http://www.ors.state.sc.us/default.htm	Health Information Exchange, integrated data system, and statistical research database	In operation since 2004	Any person who received services from any of the agencies linked into the integrated data circle	Private foundation funding

APPENDIX B: WEB-BASED RESOURCES FOR MEDICAID AND SCHIP HIT EFFORTS

Helping States with Funding

- Catalogue of Federal Domestic Assistance <http://www.cfda.gov/>
- Centers for Disease Control and Prevention, Immunization Registry <http://www.cdc.gov/vaccines/programs/iis/default.htm>
- Title V Maternal and Child Health Services <http://mchb.hrsa.gov/grants/default.htm>
- Center for Healthcare Strategies, ROI Calculator for Quality Initiatives http://www.chcs.org/publications3960/publications_show.htm?doc_id=678806
- Health Resources and Services Administration, Open Funding Opportunities <http://www.hrsa.gov/grants/>

Helping States with Governance

- Medicaid Information Technology Architecture (MITA) <http://www.cms.hhs.gov/MedicaidInfoTechArch>
- Office of the National Coordinator for Health Information Technology <http://www.os.dhhs.gov/healthit/>

Helping States Learn from One Another

- Agency for Healthcare Research and Quality
 - Health Care Innovations Exchange: <http://www.innovations.ahrq.gov>
 - National Resource Center for HIT: <http://healthit.ahrq.gov/portal/server.pt>
- Center for Health Transformation, State Solutions http://www.healthtransformation.net/cs/state_solutions
- eHealth Initiative, Connecting Communities Toolkit <http://ccbh.ehealthinitiative.org/communities>
- Health Information and Management Society: State Dashboard <http://www.himss.org/StateDashboard>
- NASCIO, Resources & Tools <http://www.nascio.org/resources>
- National Association of State Medicaid Directors, Multi-State Collaboration for Medicaid Transformation <http://www.nasmd.org> (login required)
- National Conference of State Legislatures, Health Information Technology Champions <http://hitchampions.org>
- National Governors' Association, State Alliance for e-Health <http://www.nga.org/center/ehealth/>

Helping States Address Privacy, Consumer, and Other Technical Assistance Needs

- Agency for Healthcare Research and Quality
 - Child Health Care Quality Toolbox: <http://www.ahrq.gov/CHToolBx/index.htm>
 - Health Information Security and Privacy Collaboration Toolkit: http://healthit.ahrq.gov/portal/server.pt?open=514&objID=5562&mode=2&holderDisplayURL=http://prodportallb.ahrq.gov:7087/publishedcontent/publish/communities/a_e/ahrq_funded_projects/rti_toolkit/main/rti_toolkit.html
- Health Resources and Services Administration, Electronic Health Records: Selection Guidelines for Health Centers <http://www.hrsa.gov/healthit/ehrguidelines.htm>
- Markle Foundation, Tools for Health Information Exchange Networks <http://connectingforhealth.org/resources/guidance.html>
- National Conference of State Legislatures (NCSL), Privacy Resources Webpage <http://www.ncsl.org/programs/lis/cip/priv/privacy.htm>

ENDNOTES

¹ Health Information Technology (HIT) is a term that encompasses a large range of products and systems. The term includes all software, hardware, and infrastructure used to collect, store, exchange, and use patient data throughout the clinical practice of medicine.

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⁴ Vernon Smith, et al., *Headed for a Crunch: An Update on Medicaid Spending, Coverage and Policy Heading into an Economic Downturn* (Washington, DC: Kaiser Commission on Medicaid and the Uninsured, Sept. 2008) (<http://www.kff.org/medicaid/7815.cfm>).

⁵ Kaiser Family Foundation, Kaiser Fast Facts, “Medicaid Enrollees and Expenditures by Enrollment Group, 2005,” May 2008 (<http://facts.kff.org/chart.aspx?ch=465>).

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¹³ Derek Lieser, Project/Planning Manager, Oklahoma Health Care Authority, Personal communications with author, 7 May and 10 Sept. 2008; Ibid. 24.

¹⁴ Pete Bailey, Chief, Health & Demographic Statistics, Office of Research & Statistics, Personal communications with author, 14 May and 15 Sept. 2008.

¹⁵ Florence Love, Medicaid Program Policy, Florida Dept. of Children & Families, Personal communications with author, 16 May and 11 Sept. 2008.

¹⁶ George Hoover, Deputy Commissioner, Office of CHIP and adultBasic, PA Insurance Dept., Personal communications with author, 23 May and 10 June 2008; Ed Naugle, Project Officer, Office of CHIP and adultBasic, PA Insurance Dept., Personal communications with author, 10 Sept. and 30 Oct. 2008.

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¹⁸ Mary Wood, Chief, Health & Recovery Services Administration, Personal communication with author, 16 May, 2008.

¹⁹ For more information on eFIND, see The Children’s Partnership, *E-Health Snapshot: Harnessing Technology to Improve Medicaid and SCHIP Enrollment and Retention Practices* (Washington, DC: Kaiser Commission on Medicaid and the Uninsured, May 2007) (<http://www.kff.org/medicaid/7647.cfm>).

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- ²³ U.S. Government Accountability Office, *Medicaid: States Reported Citizenship Documentation Requirement Resulted in Enrollment Declines for Eligible Citizens and Posed Administrative Burdens* (Washington, DC: GAO-07-889, July 2007) (<http://www.gao.gov/products/GAO-07-889>).
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- ²⁵ Shaun Alfreds, Eric Masters, and Jay Himmelstein, *Center for Health Policy and Research, Opportunities for Facilitating Electronic Health Information Exchange in Publicly Funded Programs: Findings from Key Information Interviews with Medicaid and SCHIP Leadership and Staff* (Shrewsbury, MA: U. Mass. Medical School, no date) (www.nga.org/files/pdf/0801EHEALTHUMASSREPORT.PDF).
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⁵³ Maureen McKinney, "Governors' interest in HIT rises," *GovernmentHealthIT*, 4 April 2008.

⁵⁴ For information about the cost-effectiveness of investing in e-enrollment systems, see: The Children's Partnership, *E-Health Snapshot: Harnessing Technology to Improve Medicaid and SCHIP Enrollment and Retention Practices* (Washington, DC: Kaiser Commission on Medicaid and the Uninsured, May 2007) (<http://www.kff.org/medicaid/7647.cfm>).

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⁶⁴ Alfreds, Masters, and Himmelstein, op. cit. (25) 5; Bernie Monegan, "State laws impede health data exchange," *Healthcare IT News*, 2 May 2008.

⁶⁵ Alfreds, Masters, and Himmelstein, op. cit. (25) 6.

⁶⁶ See op. cit. (51) for discussion of Medicaid funding matches.

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⁶⁸ For instance, feedback from states indicates that the limitations placed on grants and contracts from the CDC in regard to focus, time, and specificity have been barriers to using such funding for comprehensive health IT transformation.

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⁷⁰ To learn more about these standards, see <http://www.os.dhhs.gov/healthit/standards/recognition/>. See, also, Office of the National Coordinator for Health Information Technology, *The ONC-Coordinated Federal Health IT Strategic Plan: 2008-2012* (Washington, DC: Department of Health & Human Services, June 3, 2008).

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For further information on E-Health for Children from The Children's Partnership, see:

Defining and Promoting an E-Health Agenda for Children

<http://www.childrenspartnership.org/ehealth>

Improving Health Outcomes for Children in Foster Care: The Role of Electronic Record Systems (2008)

<http://www.childrenspartnership.org/reports/fostercare>

Information Technology Making a Difference in Children's Lives: An Issue Brief for Leaders for Children (2008)

<http://www.childrenspartnership.org/reports/informationtechnology>

Meeting the Health Care Needs of California's Children: The Role of Telemedicine, 2nd Ed. (2007)

<http://www.childrenspartnership.org/reports/telemedicine>

Meeting the Needs of California's Children in Schools and Child Care: Telemedicine Can Help (2007)

<http://www.childrenspartnership.org/schoolstelemedicine>

Helping Our Children with Disabilities Succeed: What's Broadband Got To Do With It? (2007)

<http://www.childrenspartnership.org/reports/broadbanddisabilities>

E-Health Snapshot: Harnessing Technology to Improve Medicaid and SCHIP Enrollment and Retention Practices (2007)

<http://www.kff.org/medicaid/7647.cfm>

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