

## **Innovative Approaches to Improving Health Care Value: Examples from the States**

Americans are increasingly living with chronic conditions such as asthma, cancer, cardiovascular disease, and diabetes. By the year 2020, an estimated 157 million Americans will have at least one chronic condition and 81 million will have multiple chronic conditions.<sup>1</sup> Because people with chronic conditions use more health care than others, consuming nearly 80 percent of all health care spending, they are particularly vulnerable to poor outcomes and high costs due to inappropriate care. Evidence suggests that American adults receive recommended care only about half the time, with under-utilization more common than over-utilization.<sup>2</sup> For example, people with diabetes receive only about 45 percent of the care they need, which increases their risk of kidney failure, blindness, and amputation of limbs. Improving care for people with chronic conditions offers the potential to both improve health outcomes and constrain cost growth.

Many states are undertaking efforts to improve care for people with chronic conditions. According to the Kaiser Commission on Medicaid and the Uninsured, more than 25 states are developing or have implemented Medicaid disease management or case management initiatives in their non-managed care programs.<sup>3</sup> States report promising results from these programs in terms of both health outcome improvements and cost savings.<sup>4</sup>

State efforts to make better use of information technology can also lead to substantial improvements. Health information technology facilitates identification of quality concerns, development of clinical best practices, and appropriate care management for individuals with chronic conditions and for all patients. Evidence suggests that the administrative and clinical efficiencies made possible by better health information technology will improve health care quality and could result in savings of up to \$140 billion per year nationally.<sup>5</sup>

This report highlights examples of health care innovations taking place in the states with the assistance of state and/or local agencies. These profiles provide a sample of the spectrum of activities under way in the states both to advance health care information technology and to improve care for individuals with chronic health conditions. Such efforts offer tremendous potential to promote high-quality, high-value health care.

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<sup>1</sup> Robert L. Mollica and Jennifer Gillespie, Care Coordination for People with Chronic Conditions, prepared for Partnership for Solutions, January 2003, see [http://www.partnershipforsolutions.org/DMS/files/Care\\_coordination.pdf](http://www.partnershipforsolutions.org/DMS/files/Care_coordination.pdf)

<sup>2</sup> Elizabeth A. McGlynn et al., The Quality of Health Care Delivered to Adults in the United States, *New England Journal of Medicine*, Vol. 348, No. 26, June 26, 2003, pp. 2635-2645.

<sup>3</sup> Vernon Smith et al., The Continuing Medicaid Budget Challenge: State Medicaid Spending Growth and Cost Containment in Fiscal Years 2004 and 2005, Kaiser Commission on Medicaid and the Uninsured, October 2004, Appendix J and K, see <http://www.kff.org/medicaid/7190.cfm>

<sup>4</sup> Claudia Williams, Medicaid Disease Management: Issues and Promises, Kaiser Commission on Medicaid and the Uninsured, September 2004, see <http://www.kff.org/medicaid/7170.cfm>

<sup>5</sup> U.S. Department of Health and Human Services, "Fact Sheet— HIT Report At-A-Glance," 21 July 2004, see <http://www.hhs.gov/news/press/2004pres/20040721.html>

## Examples from the States

### CALIFORNIA

#### *Santa Barbara County Care Data Exchange*

- The Santa Barbara County Care Data Exchange is a community-wide collaboration designed to improve the quality, clinical efficiency, and safety of health care by making patient information more readily available at the point of care.
- Supported by a three year, \$10 million grant from the California HealthCare Foundation (CHCF), the Care Data Exchange brings together leading public and private health care organizations throughout Santa Barbara County.<sup>6</sup> Participants include the Santa Barbara Regional Health Authority, Santa Barbara County Public Health Department, the University of California, Santa Barbara, the Santa Barbara Medical Society, and leading medical groups, hospitals, and other health care provider organizations in the county.
- The exchange relies on an Internet-based solution, developed by CareScience, Inc., that enables clinical information sharing within and among authorized users, including patients.<sup>7</sup> There is no central data repository. Instead, participating organizations work closely together to ensure that the exchange allows data to be available as necessary at the point of care, but with protections against inappropriate access or use for proprietary advantage.
- An interim analysis found a net financial benefit to the county of \$1 million per year, even without taking into account the benefits of clinical efficiencies or health care quality improvements.<sup>8</sup>

### INDIANA

#### *Indiana Network for Patient Care (INPC)*

- The INPC began in 1997 as a health information exchange among all five of the major hospital systems and two large primary care groups in Indianapolis for use in emergency and primary care. State and local public health departments also participate in the network.
- A wide variety of clinical information is available, including patient demographics; emergency department, inpatient and outpatient encounter data; lab results; diagnoses and procedures codes. The network provides e-mail services, Internet access, electronic medical record access, and medical library services.
- The INPC can also generate both patient-specific and population-based reports to facilitate clinical care. The network enables a physician examining a patient in any of the thirteen participating emergency rooms to access, with the patient's consent, a virtual medical record containing

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<sup>6</sup> California HealthCare Foundation and CareScience, "Santa Barbara County Care Data Exchange," see <http://www.chcf.org/documents/ihealth/SantaBarbaraFSWeb.pdf>

<sup>7</sup> CareScience, "Santa Barbara County Care Data Exchange," see [http://www.carescience.com/healthcare\\_providers/cde/care\\_data\\_exchange\\_santabarbara\\_cde.shtml](http://www.carescience.com/healthcare_providers/cde/care_data_exchange_santabarbara_cde.shtml)

<sup>8</sup> David J. Brailer et al., "Moving Toward Electronic Health Information Exchange: Interim Report on the Santa Barbara County Care Data Exchange," California HealthCare Foundation, July 2003, see <http://www.chcf.org/documents/ihealth/SBCCDEInterimReport.pdf>

information about that patient from all of the participating institutions. The INPC also allows real-time lab result data to be used for active surveillance of reportable conditions.<sup>9</sup>

- Over 2,500 physicians are expected to be participating in the INPC by the end of 2004. When the system is fully implemented, it is expected to reduce health care costs in Central Indiana by up to 10 percent.<sup>10</sup>
- The network will eventually be expanded statewide under the direction of a new non-profit organization called the Indiana Health Information Exchange (IHIE). The IHIE is a collaborative effort of 13 organizations, including the Indiana State Department of Health.<sup>11</sup>

## KANSAS

### *TeleKidcare*

- TeleKidcare is a health care delivery system that uses telemedicine technology to ensure that all children receive health care regardless of socio-economic condition, transportation availability, health insurance status, or language barriers.<sup>12</sup> The program began in 1998 as a joint effort between the Kansas City, Kansas, public school system and the University of Kansas Medical Center (KUMC), after school nurses reported that school children were not able to access routine health care in the community on a timely basis. As a result, children missed school days and often had to resort to costly emergency room care.
- TeleKidcare technology, consisting of interactive television, a digital otoscope, and an electronic stethoscope, allows physicians at KUMC to “see” children in their school nurse’s office. Parents and the school nurse participate in the remote consult. KUMC physicians are able to use TeleKidcare to diagnose and treat a wide range of ailments. The program also provides education and counseling about chronic conditions, develops treatment plans, and promotes continuity of care.
- The project has provided nearly 1,900 consultations in the original school district. The majority of children were either covered by Medicaid (46 percent) or were uninsured (32 percent). Kansas has developed a Medicaid billing code for TeleKidcare services and the program has been replicated in 21 communities throughout the state.<sup>13</sup>

## MASSACHUSETTS

### *Massachusetts Simplifying Healthcare Among Regional Entities (MA-SHARE)*

- MA-SHARE seeks to promote the inter-organizational exchange of healthcare data in order to make accurate clinical health information available wherever needed in an efficient, cost-effective and safe

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<sup>9</sup> Marc Overhage of Regenstreif Institute, testimony before the Subcommittee on Health of the House Committee on Ways and Means, 17 June 2004, see <http://waysandmeans.house.gov/hearings.asp?formmode=view&id=1655>

<sup>10</sup> Bill Theobald, “Health Data Network Praised,” *Indianapolis Star*, 23 September 2004, see <http://www.indystar.com/articles/1/180890-3931-223.html>

<sup>11</sup> Foundation for eHealth Initiative, “Connecting Communities for Better Health Awardee: Indiana Health Information Exchange,” see [http://ccbh.ehealthinitiative.org/Awardee\\_IHIE.msp](http://ccbh.ehealthinitiative.org/Awardee_IHIE.msp)

<sup>12</sup> Center for Telemedicine and Telehealth, University of Kansas Medical Center, “TeleKidcare,” see <http://www2.kumc.edu/telemedicine/programs/telekidcare.htm>

<sup>13</sup> U.S. Department of Health and Human Services, Best Practice Initiative from the Assistant Secretary for Health, “TeleKidcare,” see [http://phs.os.dhhs.gov/ophs/BestPractice/telekidcare\\_kansas.htm](http://phs.os.dhhs.gov/ophs/BestPractice/telekidcare_kansas.htm)

manner. It is currently soliciting proposals from healthcare organizations interested in piloting clinical information technology projects.<sup>14</sup>

- MA-SHARE began in 2003 and by January 2004, seven projects had been endorsed. The anchor project for MA-SHARE is MedsInfo-ED, a technology solution intended to provide real-time medication history information to emergency departments. MedsInfo-ED is scheduled to be available statewide in 2004/2005. MA-SHARE will conduct an evaluation to quantify the financial value of the project and build a business case for further expansion.<sup>15</sup>
- MA-SHARE is an initiative of the Massachusetts Health Data Consortium (MHDC), an organization founded in 1978 by the state's major public and private health care organizations to collect, analyze, and disseminate health care information.
- MHDC also facilitated the creation of the New England Healthcare EDI Network (NEHEN), a consortium of regional payers and providers who have designed and implemented a secure and innovative electronic-commerce solution for reducing health care administrative costs.<sup>16</sup>

## **NORTH CAROLINA**

### ***North Carolina Healthcare Information and Communications Alliance (NCHICA)***

- NCHICA is a nonprofit consortium of over 250 organizations dedicated to improving healthcare through information technology and secure communications. NCHICA members include health care providers, health plans, and national, state, and local health agencies.
- NCHICA engages in a wide range of information technology efforts. The collaborative has numerous administrative simplification workgroups to develop standards and compliance guidelines for electronic transactions, privacy, and security.
- NCHICA also runs the Provider Access to Immunization Registry Securely (PAiRS) project, which enables providers to look up immunization information from public and private databases over the Internet.<sup>17</sup>
- Another NCHICA project, the North Carolina Community Medication Management Project, will provide clinicians with Internet-based medication histories at the point of care and integrate the information into automated refill and electronic prescribing systems. The project is being piloted in rural Rockingham County. Participants in the project include the state Medicaid program, the North Carolina Teachers' and State Employees' Comprehensive Major Medical Plan, and the Rockingham County Department of Public Health.<sup>18</sup>

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<sup>14</sup> Massachusetts Health Data Consortium, "MA-SHARE Program Overview," see <http://www.mahealthdata.org/ma-share/mission.html>

<sup>15</sup> Massachusetts Health Data Consortium, Patient Safety & Quality of Care: The Diffusion of Local Innovations, April 2004, see <http://www.mahealthdata.org/consortium/reports/2004-AnnualReport.pdf>

<sup>16</sup> New England Healthcare EDI Network, see <http://www.nehen.net/>

<sup>17</sup> North Carolina Healthcare Information and Communications Alliance, Provider Access to Immunization Registry Securely (PAiRS) overview, see <http://www.nchica.org/AboutNCHICA/Activities/PAIRSdemo.htm>

<sup>18</sup> North Carolina Healthcare Information and Communications Alliance, "North Carolina Community Medication Management Project," see <http://www.nchica.org/Activities/ehealth.htm>

## **PENNSYLVANIA**

### ***Pittsburgh Regional Healthcare Initiative (PHRI)***

- PHRI is a broad consortium of hospitals, physicians, insurers, employers, and state and local officials working to improve patient care in southwestern Pennsylvania.<sup>19</sup> The initiative focuses on linking patient outcomes data with clinical practice to achieve region-wide shared learning and quality improvement.
- A key component of the PHRI is to use public data available through the Pennsylvania Health Care Cost Containment Council (PHC4, an independent state agency)<sup>20</sup> to provide baseline information about, and on-going monitoring of, potentially inappropriate care and preventable complications in five clinical areas, including depression and diabetes.<sup>21</sup>
- PHRI is also leading an effort to build a regional chronic disease registry called the Pittsburgh Health Information Network, a central database that will collect and organize relevant pharmacy, preventive care, and lab data for diabetic and depressed patients from multiple sources and allow physicians to pull this information on demand from a single Internet source.<sup>22</sup>

## **RHODE ISLAND**

### ***Rhode Island Health Improvement Initiative (RIHII)***

- The Rhode Island Health Improvement Initiative is a newly launched project of the Rhode Island Quality Institute, a non-profit collaborative of payers, providers, academic institutions, and government agencies.
- The four-year RIHII project aims to enable and reward the delivery of high quality, cost-effective care by physicians on a community-wide basis. The initiative will provide physicians with the hardware and software infrastructure to support their access to patient information and guide their clinical decisions. These systems will electronically connect physicians, hospitals, labs, imaging systems and other providers within the community.
- The RIHII will also provide significant financial incentives – up to \$25,000 per year – to reward high quality outcomes. The initiative will include an evaluation of clinical outcomes, quality, safety, consumer satisfaction and cost.<sup>23</sup>

## **SOUTH CAROLINA**

### ***Hypertension Initiative of South Carolina***

- Hypertension and its related problems cause South Carolina to lose about \$9 billion a year in direct medical costs and indirect costs such as lost productivity.

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<sup>19</sup> Pittsburgh Regional Health Initiative, <http://www.prhi.org/>

<sup>20</sup> Pennsylvania Health Care Cost Containment Council, <http://www.phc4.org/>

<sup>21</sup> C. Sirio et al, "Pittsburgh Regional Healthcare Initiative: A Systems Approach For Achieving Perfect Patient Care," *Health Affairs*, Vol. 22, No. 5, September/October 2003.

<sup>22</sup> PRHI 2004 Status Report, see <http://prhi.org/score.cfm>

<sup>23</sup> Rhode Island Quality Institute, "Rhode Island Health Improvement Initiative: Executive Summary," 8 June 2004, see <http://www.riqi.org/RIHIIes.pdf>

- To reduce this burden, the state began a Hypertension Initiative in April 1999 to provide feedback and cardiovascular risk management advice to primary care providers and to train hypertension specialists.<sup>24</sup> The principal, long-term goal of the Hypertension Initiative is to facilitate the transition of South Carolina from a leader in cardiovascular deaths to a model of cardiovascular health – taking South Carolinians from "worst to first."<sup>25</sup> The Initiative is run by the Medical University of South Carolina with funding from the Division of Cardiovascular Health in the South Carolina Department of Health and Environmental Control.<sup>26</sup>
- Among its accomplishments to date, the Initiative has developed unique computer programs to remotely download and merge data from a wide array of Electronic Medical Record (EMR) systems. A care management database representing more than 79,000 non-duplicated individuals with hypertension provides valuable information on potential age, gender, and race disparities in evidence-based care.<sup>27</sup>

## UTAH

### *Utah Health Information Network*

- UHIN is a non-profit organization comprised of a broad-based coalition of health care providers, health plans, and other interested parties, including state programs such as the Utah Department of Health and the Public Employees Health Program.
- The participants' goal is to reduce health care administrative costs through standardization of administrative health data and electronic commerce. The network acts as a hub for health care transactions, such as claims submission, throughout the state. UHIN does not review or store data, but transmits it securely among the network's subscribers in a single standardized format. Payers and providers have been able to reduce paperwork and the staff time and other operational costs that go with it.<sup>28</sup>

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<sup>24</sup> Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services, "Research Activities," January 2004, No. 281, see <http://www.ahrq.gov/research/jan04/0104RA2.htm>

<sup>25</sup> The Hypertension Initiative, <http://worst2first.musc.edu/>

<sup>26</sup> Division of Cardiovascular Health, South Carolina Department of Health and Environmental Control, "Hypertension Initiative of South Carolina," see <http://www.scdhec.net/cvh/hypertension.htm>

<sup>27</sup> U.S. Department of Health and Human Services, Best Practice Initiative from the Assistant Secretary for Health, "Hypertension Initiative of South Carolina," see [http://phs.os.dhhs.gov/ophs/BestPractice/SC\\_hypertension.htm](http://phs.os.dhhs.gov/ophs/BestPractice/SC_hypertension.htm)

<sup>28</sup> Utah Health Information Network, see <http://www.uhin.com/about/index.htm>