CHCS Center for
Health Care Strategies, Inc.

Environmental Scan

Health Supports for Consumers with Chronic Conditions

By
Melanie Bella, Elizabeth Cobb,
and Joanie Rothstein
Center for Health Care Strategies

Claudia Williams
AZA Consulting

November 2005

Funded through a grant from Kaiser Permanente with additional support from The Robert Wood Johnson Foundation.

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The Center for Health Care Strategies (CHCS), founded in 1995, is a nonprofit health policy resource center seeking to advance the quality and value of health care services for low-income populations and people with chronic illnesses and disabilities. CHCS works with state agencies, health plans, providers, and consumer groups to develop cost-effective solutions that deliver measurable improvements in consumer health. CHCS believes that Medicaid, as the nation's largest health care purchaser and the most sophisticated purchaser of managed care services, is uniquely positioned to demonstrate the long-term value — for people, for health plans and providers, for government, and for society as a whole — of investing in the improvement of health care quality.

This report was produced under the *Medicaid Value Program: Health Supports for Consumers with Chronic Conditions*, a collaborative of 10 diverse organizations — four health plans, two state Medicaid agencies, one clinical research organization, one academic medical center, one safety net provider, and one disease management organization — to develop and test models of care management for Medicaid consumers with co-morbidities. This CHCS initiative is funded by Kaiser Permanente Community Benefit, with additional support from The Robert Wood Johnson Foundation.

For more information about the *Medicaid Value Program* and other CHCS initiatives, visit www.chcs.org.

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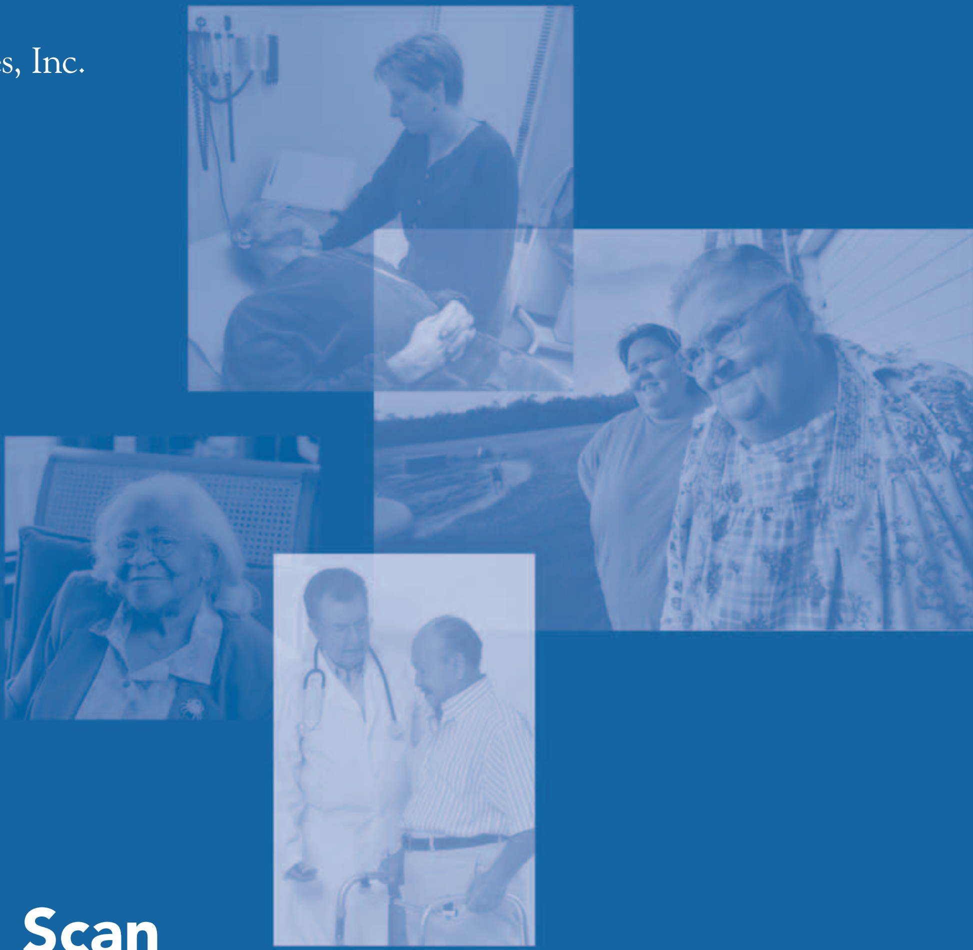

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Acknowledgements

The authors thank the numerous individuals who helped distill the components for a comprehensive chronic care infrastructure detailed herein. In particular, we are grateful to the insights of our expert panel members as well as the on-the-ground perspectives from experts across the country. We recognize Ray Baxter, PhD, Maureen Hanrahan and Paul Wallace, MD from Kaiser Permanente for their inspirational guidance. In addition, we thank Stephen Somers, PhD, President of CHCS, for keen direction and leadership; and Lorie Martin, of CHCS, for editorial contributions.

Finally, and most importantly, we are grateful to the generous support and foresight of Kaiser Permanente Community Benefit, which is providing not only funding, but a wealth of knowledge, data-rich experience, and innovative tools to significantly advance care management practices to improve the health and quality of life of people with multiple chronic conditions.

Foreword

For years, we have been hearing from our stakeholders that existing approaches to identifying, delivering services to, and assessing the quality of care for Medicaid consumers with co-morbid chronic conditions were, for the most part, not meeting the needs of this most high-risk and high-cost population. That is why we at the Center for Health Care Strategies (CHCS) embraced the opportunity when Kaiser Permanente asked us to consider a major initiative to advance our collective understanding of the nature and scope of the complex co-morbidities in a Medicaid population. The intent of the proposed initiative was to promote the development of new models of care that could take us beyond management of single diseases and even beyond the bifurcation of physical and behavioral health care and some of the other social supports needed by so many consumers with multiple chronic conditions who are served by Medicaid as well as those who are dually eligible for Medicaid and Medicare. With significant backing from Kaiser Permanente Community Benefit and additional support from The Robert Wood Johnson Foundation, CHCS launched the *Medicaid Value Program: Health Supports for Consumers with Chronic Conditions*. Ten early innovator teams were chosen to participate in this two-year collaborative to expand, enhance, and assess new models of care for Medicaid consumers with different combinations of serious illness and disability. The collaborative will run through December 2006.

As a first step to guide the efforts of the 10 participating teams, CHCS conducted an environmental scan of existing programs across the country to unearth state-of-the-art approaches and important future directions. The nationwide scan revealed six key components that we believe are essential for a comprehensive, sustainable chronic care infrastructure. The key components are:

1. Identification of target populations
2. Guidelines and measures
3. Information technology
4. Care management
5. Consumer role
6. Financing and incentives

This report, which details considerations for each of these components and defines the need for an "organizing entity" to oversee these functions, is our first installment in what we hope will be a series of valuable insights and lessons for our stakeholders — the state Medicaid agencies, managed care organizations, providers, and consumer groups — to improve the quality of care for their beneficiaries, particularly those with intense, chronic health care needs.

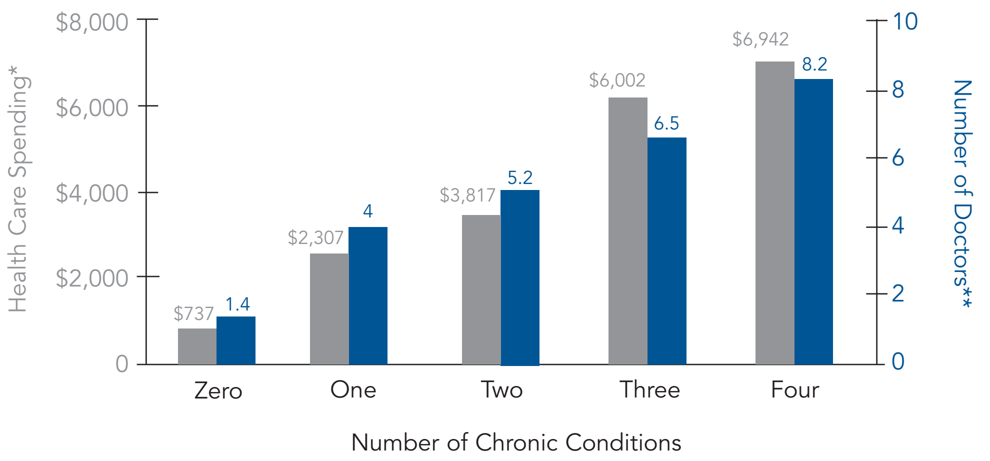
Background

Statistics paint a compelling picture of the impact of chronic illnesses in the United States today. More than 90 million Americans live with chronic illnesses, accounting for greater than 75 percent of the nation's $1.4 trillion medical care costs and one-third of the years of potential life lost before age 65.[1] Chronic disabling conditions cause major limitations in activity for more than one of every 10 Americans, or 25 million people.

The impact of chronic illness on Medicaid programs is even more staggering. Almost two thirds (61 percent) of adult Medicaid enrollees have a chronic or disabling condition, most frequently diabetes, hypertension, asthma, psychoses, and chronic depression.[2] Eighty percent of Medicaid resources are spent on this population.[3]

Almost half (46 percent) of Medicaid enrollees with one chronic or disabling condition have another, often a mental health condition. As the number of conditions increases, so too does the cost and complexity of health care. Annual health care costs are nearly tenfold higher for Medicaid enrollees with four chronic conditions ($6,942) compared to enrollees with no chronic conditions ($737), and the average number of physicians treating a Medicaid enrollee rises from 1.4 for enrollees with no chronic conditions to 8.2 for enrollees with four conditions (Figure 1).

Figure 1: Average Annual Per Capita Health Care Spending and Number of Doctors of Chronic Conditions for Medicaid Enrollees



Source: C. Williams, "Medicaid Disease Management: Promises and Pitfalls," Kaiser Family Foundation, 2004.
Data Source: Medical Expenditure Panel Survey, 1998. Data for all Medicaid enrollees.

*Mean cost per capita **Average number of unique physicians

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[1] National Center for Chronic Disease Prevention and Health Promotion, "Chronic Disease Overview," http://www.cdc.gov/nccdphp/overview.htm (26 September 2005).

[2] S. Allen and A. Croke, *The Faces of Medicaid: The Complexities of Caring for People with Chronic Illnesses and Disabilities*, Center for Health Care Strategies (2000).

[3] Partnership for Solutions, "Chronic Conditions: Making the Case for Ongoing Care," December 2002, http://www.partnershipforsolutions.com/dms/files/chronicbook2002.pdf (26 September 2005).

Despite the high cost of care and involvement of multiple providers among this population, there is considerable evidence that people with chronic conditions do not receive the health care they need. A study of adults with medical conditions showed that only 45 percent of people with diabetes get the care they need and only 25 percent receive recommended testing to monitor their condition.[4] The data would likely be significantly worse for people with diabetes and one or more other chronic conditions.

In recent years many Medicaid programs have implemented traditional disease management programs to address problems related to chronic care. Programs typically cover a handful of conditions — often diabetes, asthma, and congestive heart failure — but use care management approaches that "silo" patients into single-disease focused interventions. These programs fall short of the ideal for enrollees with more than one chronic condition for a number of reasons: they offer no strategies for assessing and prioritizing enrollees' multiple problems; they leave in place a fragmented and non-integrated delivery system; and they fail to incorporate the behavioral and non-medical (wrap-around) services needed by this population but not typically included in disease management programs.

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[4] E. A. McGlynn et al., "The Quality of Health Care Delivered to Adults in the United States." *New England Journal of Medicine* 348, no. 26 (2003).

Introduction

The *Medicaid Value Program: Health Supports for Consumers with Chronic Conditions (MVP: HSCCC)* is supporting 10 innovation teams that will develop and test groundbreaking approaches to address the needs of Medicaid enrollees with multiple chronic conditions. This environmental scan is the first product of this initiative. The report synthesizes literature, expert views, and on-the-ground experience to describe the issues and problems associated with improving the care and health of Medicaid consumers with multiple chronic conditions and to outline potential best practices in key areas.

MVP: HSCCC Innovation Teams

CareOregon

Comprehensive NeuroScience, Inc.

District of Columbia Department of Health Medical Assistance Administration

Johns Hopkins Healthcare, LLC

Managed Health Services, Inc.

McKesson Health Solutions

Memorial Healthcare System

Partnership HealthPlan of California

University of California at San Diego

Washington State Department of Social and Health Services

Information and insights for the environmental scan were gathered through:

- Literature and document review;
- Interviews and site visits with experts and leaders of on-the-ground initiatives (see Appendix A);
- Input and debate with the Expert Panel convened for this initiative (see Appendix B); and
- Surveys of state Medicaid directors and health plan representatives.

As anticipated, the interviews provided the richest and most interesting information for the environmental scan. While there are many documents and articles focused broadly on chronic disease and chronic care, few address the specific issues of chronic care for low-income consumers with co-morbidities.

The environmental scan revealed six key components that we believe are essential for a comprehensive, sustainable chronic care infrastructure. The report outlines considerations for each of the components as well as discussions about larger issues that impact our ability to serve consumers with multiple chronic conditions. The components are:

1. Identification of target populations
2. Guidelines and measures
3. Information technology
4. Care management
5. Consumer role
6. Financing and incentives

Following the discussion of these key components, we present the need for an "organizing entity" to provide an infrastructure for setting priorities of chronic care improvement, bringing together stakeholders, determining how to improve communication and data sharing among these groups, and potentially realigning reimbursement and incentives.

Identification of Target Populations

The first essential step in designing any chronic care management program is to define and identify the target population. The identification methodology will vary greatly depending on the goals and expected outcomes of the program. Identification methodologies are typically structured to target specific conditions, high-cost individuals, or high-risk individuals.

The first essential step in designing any chronic care management program is to define and identify the target population

Traditional disease management programs use a disease-specific approach to identify enrollees and organize care management. Programs identify individuals with a given chronic disease (asthma, diabetes, CHF, COPD) using ICD-9 diagnosis codes from inpatient, outpatient, and pharmacy claims data. Identifying eligible individuals through administrative data is simple and inexpensive, but has potential drawbacks due to variations in physician coding, incomplete data, inability to identify co-morbidities, and data lags.[5]

Other chronic care programs are designed to target and provide interventions to high-cost individuals. High-cost enrollees are identified through claims data and assigned to programs designed to manage care and control utilization. This method of identification has been subject to criticism because it fails to catch at-risk members before they become high utilizers. Additionally, program evaluation is difficult due to "regression to the mean." That is, individuals identified as high-cost one year are likely to use fewer services the following year even absent an intervention.

Many disease management programs are now identifying target populations through predictive modeling. Predictive modeling uses historical claims data to forecast future adverse events and high utilization. This method can identify individuals who are at risk of becoming high utilizers, allowing a preventive rather than reactive approach. But there are also potential drawbacks to this approach. Because these are proprietary tools, vendors may not be eager to share the individual-level details or specifications that might allow program managers to use the results not just to identify members but also to shape interventions.[6]

Once the population has been identified, it is often stratified into groups by risk level. High-risk groups will typically require a more aggressive intervention, such as high-touch nurse case managers. Low-risk groups may receive telephonic interventions or some other type of less intense strategy.[7] Like identification, risk stratification can be done in many different ways including by cost and by actual or predicted utilization.[8]

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[5] V. Villagra, "Strategies to Control Costs and Quality: A Focus on Outcomes Research for Disease Management," *Medical Care* 42, no. 4 supp (April 2004): 24-30.

[6] M. Cousins, L. Shickle, J. Bander, "An Introduction to Predictive Modeling for Disease Management Risk Stratification," *Disease Management* 5, no. 3 (3 September 2002): 157-167.

[7] M. Schatz, R. Nakahiro, C. Jones, R. Roth, A. Joshua, D. Petitti, "Asthma Population Management: Development and Validation of a Practical 3-Level Risk Stratification Scheme," *The American Journal of Managed Care* 10, no. 1 (January 2004): 25-32.

[8] J. Rosenzweig, K. Weinger, L. Poirier-Soloman, M. Rushton, "Use of a Disease Severity Index for Evaluation of Healthcare Costs and Management of Comorbidities of Patients with Diabetes Mellitus," *The American Journal of Managed Care* 8, no. 11 (November 2002): 950-958.

Future Direction

- Regardless of the identification method chosen, from a data, cost, and efficiency standpoint, it will make sense to centralize the identification process for most chronic care initiatives. In many cases, the state Medicaid agency will be the source of data and will conduct the identification process. In other cases, a Medicaid health plan or vendor may complete the identification process using identification criteria that they have either developed or that has been provided by the state.

- For the foreseeable future, individual disease states will still drive identification and treatment. Although there is widespread interest in developing a "person-centered" rather than a "disease-centered" approach to chronic care, the process will still likely start with the identification of enrollees with particular diseases or clusters of conditions. Identifying clusters of conditions is an emerging approach that warrants further investigation because it holds great promise for more effectively looking at the whole person and taking into account the presence of multiple chronic conditions.

- Even if a single disease is the "ticket in" to the program, the identification process needs to examine the whole patient, his/her risks, and co-morbidities. An initial approach would be to conduct a comprehensive risk assessment of each person screened into a program as a result of his or her chronic condition. The risk assessment could identify co-morbidities and lifestyle risk factors (including diet, physical activity, and smoking) as well as social and family risk factors, which contribute to medical problems and might influence care management strategies. Ultimately, this could progress to a more ambitious population-based screening on all members to identify "pre-members" who do not yet have a chronic condition, but are candidates for lifestyle change and prevention interventions. CareOregon, a non-profit, Medicaid-only health plan serving more than 100,000 members under the Oregon Health Plan, is an early adopter in this area — screening all new members to identify those in need of complex care management.

Guidelines and Measures

There are many sources for clinical practice guidelines in the United States today. Organizations like the National Heart Lung and Blood Institute and the American Diabetes Association produce guidelines for specific diseases or conditions. Health plans such as Kaiser Permanente and GroupHealth Cooperative have produced evidence-based guidelines in a variety of areas. Finally, states (e.g., New York, Indiana) and other localities have produced guidelines for use in a specific region. The Agency for Healthcare Research and Quality's National Guideline Clearinghouse™ is a comprehensive database of evidence-based clinical practice guidelines and related documents.[9]

A recent article in *Health Affairs* outlined some of the barriers to the use of guidelines and the practice of evidence-based medicine.[10] These barriers include:

- ***The physician-patient relationship:*** There is a strong desire, on the part of both patients and physicians, to preserve the primacy of the physician-patient relationship, and the notion that care should be tailored to an individual.
- ***Lack of automation:*** It may be difficult for physicians to reference multiple and varied guidelines during a routine visit. Although not yet widely available, especially among Medicaid providers, clinical decision support systems, such as electronic medical records, may hold the key to making guidelines and other evidence-based practice tools more accessible.

Just as there are many sources of guidelines, there are a multitude of quality measures, many of them based on the evidence-based guidelines. Measurement is a fundamental component of quality improvement. Measures are typically categorized as process or outcome oriented. Process measures tend to be adapted from evidence-based guidelines and are designed to track and measure the actual care delivered as opposed to the overall health outcome or status. Examples include percentage of children with asthma on inhaled steroids, and percentage of diabetics with an annual foot exam. Outcome measures report the end result of the care delivered or overall health status, such as mortality rates, functional status, or total per member per month expenditures. There are benefits and drawbacks to using either process or outcome measures in health care, and they are most effective when used in conjunction with one another.

One challenge to measurement of care for people with co-morbidities is the early stage of development of the evidence base. That evidence base and, therefore, the decision support tools, necessary for the provision of standardized and clinically appropriate care, are not structured to guide care and care management for people with multiple chronic conditions. Indeed, many of the randomized trials that have led to disease-specific guidelines excluded patients with co-morbidities, the elderly, and people

One challenge to measurement of care for people with co-morbidities is the early stage of development of the evidence base.

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[9] National Guideline Clearinghouse, an initiative of the Agency for Healthcare Research and Quality, U.S. Department of Health and Human Services, http://www.guideline.gov (26 September 2005).

[10] D. Mendelson and T. Carino, "Evidence Based Medicine in the United States – De Rigueur or Dream Deferred," *Health Affairs* 24, no. 1 (January/February 2005): 133-136.

with disabilities. In some cases, the evidence for high-risk Medicaid consumers with complex clinical needs and physical disabilities is simply non-existent.

Understandably, guidelines and measures tend to be disease specific and do not take into account the interactive nature of multiple health care problems or provide direction for caring for patients with co-morbid conditions. However, there is increasing recognition that this needs to change — especially with the aging of the population. The interplay of multiple health issues creates an effect of "cascading conditions." Each health issue interacts with and must be examined through the lens of the others. For example, a provider treating someone with diabetes, congestive heart failure, and depression cannot just follow the specific guidelines for each standalone disease; the provider must adapt her care to take into account the interplay of the three conditions affecting that specific patient. Similarly, measuring the quality of that individual's care will have to take into account the multiple conditions. This makes it even more important to have a mix of process and outcome measures that can provide a comprehensive and holistic measure of the patient's health status and that reflect a causal relationship to the quality/care management intervention.

Future Direction

- New, flexible treatment protocols and interventions are needed, as well as ways of measuring progress for people with multiple chronic conditions that are not simply additive, but that take into account the interplay between conditions. Because disease states provide an important organizing structure and way to measure progress, the single disease will likely remain the fundamental way we think about health and treatment. Yet a more integrated approach to both treatment and measurement is needed. This will be a significant challenge for the future as we do not yet have the scientific evidence base to develop these protocols. They will need to be derived from medical "best judgment" as the evidence base is being developed. Medicaid, given its position as payer for consumers with arguably the most complex and multiple conditions, is uniquely positioned to be a significant driver of the efforts to expand the evidence base.

- A first step could be to rethink care guidelines and "change concepts" for patients with co-morbidities to prioritize the most important pieces of the intervention. This may not be as overwhelming a task as it first appears. While there are many patterns of co-morbidity, a small number account for most of the people with more than one condition. A workable approach, therefore, would be to identify one or several common clusters of conditions or key co-morbidity patterns and gather relevant practitioners to talk about how guidelines can be combined and modified for these clusters. Possible clusterings could include diabetes with cardiovascular disease and asthma with COPD, with thought given to whether depression should be taken into account in all clusters.[11] Consideration would need to be given to how the three to four important care recommendations for each of the conditions interplay, i.e., the prioritization of treatment, which trumps which and what single disease recommendations, if any, need to change.

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[11] Interview with Tom Bodenheimer, MD, Professor, University of California San Francisco, April 18, 2005.

- A next step could be to develop composite measures focusing on the most common and important disease clusters identified. A composite measure would combine disease specific measures (e.g., HbA1c, blood pressure, cholesterol), outcome measures (e.g., functional status, patient satisfaction), and a financial measure (e.g., per member per month expenditures). Composite measures could capture disease cluster recommendations, assess consumer indicators (satisfaction with care, ability to manage care, health status and functioning), and assist in projections of overall health care costs, serving as a progress "dashboard" for groups of consumers.

- A final step would be to align reimbursement and incentives to support high quality care as measured by a "snapshot" of the patient's health status and improvement as a whole as opposed to by a single condition or episode of care.

- Advances in medical technology and new decision support tools, such as predictive modeling and risk assessment methodologies, may someday allow physicians to efficiently access care recommendations based on a variety of factors and conditions, enhancing their ability to practice evidence-based medicine tailored to the individual.

Information Technology

Health information technology (HIT) tools hold great promise for improving chronic care delivery across all spectrums of the system — from payers and providers to employers and consumers. Remarks from David Brailer, MD, PhD, National Coordinator for Health Information Technology, highlight the potential:

> *"Health IT will transform the way Americans regard their health and the way they participate in health care. The important aspect of health IT is not software and computers – it is physicians making better treatment decisions, nurses and pharmacists delivering safer care, and consumers making better choices among treatment options. It is the way people connect together across a fragmented delivery system – from physician offices to hospitals to skilled nursing facilities and even to the consumer's home. It is putting consumers in control of their health status, and customizing care delivery to meet their needs."*[12]

The HIT infrastructure envisioned would be a powerful tool for improving quality and reducing costs.

Many efforts are underway to develop a national health infrastructure built on interoperable standards that will link health care information nationwide — across payers, service delivery settings, and clinical conditions. The HIT infrastructure envisioned would be a powerful tool for improving quality and reducing costs. As local, state, and national efforts unfold, it is critical that safety net providers, especially those in small one or two physician practices, not be forgotten. Efforts to support and finance HIT initiatives on the Medicare side should be explored for Medicaid as well.

Future Direction

- Provider demand for health care technology could be fostered by providing basic data that are in electronic formats and might have immediate clinical value. Data might include lab, pharmacy, emergency department alerts, and utilization measures from claims and could be collected (through some sort of automatic interface) in a centralized data warehouse. Lab data (standardized and electronically reported) could provide a rich starting place. Several initiatives have focused on this area. A clinical messaging initiative in central Indiana currently provides lab results electronically to 1,000 providers and will be expanding to all 2,700 providers in that region by the end of 2005. The California HealthCare Foundation has spearheaded the development and adoption of lab reporting standards in California. It is expected that California will have standardized lab data within the next year.

- A widely discussed tool with great potential opportunity is the electronic medical record. President Bush has called for every person to have an electronic medical record (EMR) in 10 years.[13] An electronic medical record will make it much easier to identify consumers with co-morbidities or allow the care team to look

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[12] Remarks by David Brailer, National Coordinator for Health Information Technology, at the HIMSS 2005 Conference, http://www.himss.org/content/files/DavidBrailerRemarksHIMSS2005.pdf (26 September 2005).

[13] White House Press Release, "President discusses health care, information technology benefits," Intercontinental Cleveland Clinic Suite Hotel, Cleveland, Ohio, 27 January 2005, http://whitehouse.gov/news/releases/ 2005/ 01/ 20050127-7.html (26 September 2005).

across members and diseases to identify clusters of consumers with particular patterns of conditions. But as is the case for health care technology more generally, the EMR can only support better chronic care if it is part of an overall care redesign process that introduces a more integrated and less "disease siloed" approach. We can only be partially successful if we insert an electronic medical record in a fragmented and disorganized delivery system without giving thought to the overall design of the processes and structure.

- While many small provider practices seem a long way from implementing EMRs, a handful have already taken the technological plunge (see box below). Their experiences are instructive. One of the initial challenges they face is the disruption caused by implementation of the EMR. This disruption — to care processes, office relationships, practice structure, and reimbursement — needs to be anticipated and managed. As some continuous quality improvement experts have suggested, "disruptive technology" can be productive and should, for that reason, be embraced. By disturbing existing processes and clinical care approaches, the EMR might spur needed changes, helping to disorganize, and then constructively reorganize chronic care.

Implementing an EMR in a Small Physician Practice

One physician shared his experience implementing an EMR in a four-person primary care practice. As expected, the start-up costs were significant. The hardware, software, training, and support costs for the first year of implementation at this small practice were approximately $140,000, in line with the published estimates of per physician costs ($12 to $24 thousand per physician) in the first year of implementation.[14,15] While in time the practice "broke even" financially, it underestimated other implementation demands. Every employee, from physicians to file clerks, had to re-learn their jobs and how to work within the newly redesigned office system. This process was stressful to all and required a significant adjustment period. The practice also increasingly relied on outside technology support, which proved difficult to finance given its size. The practice also found that a great deal of information is difficult to automatically upload and does not flow easily into the EMR due to the absence of national standards that link data systems. For example, while the practice has an interface for laboratory data, the majority of the information they "receive (such as radiology reports, consultations, and procedure reports) does not come in a format that the system can recognize electronically."[16] Small physician practices, like this one highlighted, form the backbone of the U.S. health care system and their adoption of automated records is critical for national movement in this direction. The arduous trial of this pioneering practice demonstrates the need for substantial financial and administrative support for these small practices to invest in information technology.

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[14] Interview with Richard Baron, MD, Greenhouse Internists, April 5, 2005.

[15] R.J. Baron, E.L. Fabens, M. Schiffman, E. Wolf, "Electronic Health Records: Just around the Corner? Or over the Cliff?" *Annals of Internal Medicine* 143, no. 3 (August 2005): 223-225.

[16] Ibid.

- Identifying innovative ways to finance the upfront investment required for purchasing and deploying HIT will be key to increasing the adoption and spread of HIT, particularly for small provider groups and/or individual practitioners. This is an area of opportunity for health plans. Plans could provide the HIT hardware/software directly, provide it indirectly through a targeted financial incentive or grant, or structure a revolving loan program for providers. There are several Medicaid plans that are seeking partnerships with others in their geographic service areas to spur the adoption of HIT among their providers. States could play this role too; although, states are more likely to be in a position to provide low cost loans as opposed to directly funding HIT for providers. Lastly, the Centers for Medicare and Medicaid Services (CMS) could be a partner in this effort. HIT is a quality improvement tool supported by CMS in the newly launched Medicare Health Support demonstration for approximately 160,000 Medicare beneficiaries with diabetes and congestive heart failure.[17] CMS could assist states through enhanced federal financial participation for HIT investments and/or by helping leverage other sources of federal funding (e.g., Agency for Healthcare Research and Quality, Department of Health and Human Services, etc.) for HIT infrastructure development.
- Another tool with potential, particularly in rural areas, is remote monitoring. Home technology can be used to monitor consumers with chronic conditions and might be an effective means to address rural health access issues, but would need to be paired with strategies to increase access to the required technology. It is unclear how it might best be used among the Medicaid population. However, home monitoring is expected to be used in the Medicare Health Support demonstration program and may provide valuable lessons and replicable practices for Medicaid programs addressing similar patient populations and conditions.

Using Home Technology in Rural Areas

Johns Hopkins HealthCare implemented a telemedicine program to address disparities in health care access and health outcomes among its rural Medicaid consumers with heart failure, diabetes, and co-morbid conditions. The TeleWatch program enables patients to be monitored remotely by Johns Hopkins specialists and disease management nurses, thus bringing specialized expertise to the care of patients in rural areas. The program decreased hospitalizations, inpatient days, and total costs as well as improved clinical indicators.[18]

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[17] Centers for Medicare and Medicaid Services Press Release, "CMS Acts to Improve Quality Care for Chronically Ill Beneficiaries," 2 August 2005, http://www.cms.hhs.gov/media/press/release.asp?Counter=1521 (26 September 2005).

[18] Johns Hopkins HealthCare/ Priority Partners Phase I Report, Improving Care for Adults with Chronic Illnesses and Disabilities BCAP Workgroup, submitted to Center for Health Care Strategies (16 April 2003).

Care Management

To date, care for Medicaid consumers with multiple chronic conditions, especially for those with both physical and behavioral co-morbidities, has been fragmented and poorly organized. The majority of Medicaid consumers with multiple chronic conditions are not part of a single system that helps them organize, make sense of, and navigate the overall health care system. They may have multiple physicians, case managers, and/or ancillary providers, but often there is no care plan and/or no person in charge of overseeing the care plan that could unite the components of care. This is an issue also faced by consumers with single chronic conditions, of course, but the challenge is more acute and complex for people with multiple chronic conditions. Our research and discussions identified four closely linked concepts — *the care team, the "go to" person, the medical home, and the care intervention* — that could, in varying combinations, provide structure for organizing care for people with multiple chronic conditions.

The majority of Medicaid consumers with multiple chronic conditions are not part of a single system that helps them organize, make sense of, and navigate the overall health care system.

Future Direction

The Care Team

Rethinking the care team for this population and how it should be organized (see box on next page), is a first step. The care team, in most cases, needs to include PCPs, specialists, behavioral health professionals, and, perhaps, pharmacists. It also needs to include the other care resources working with the consumer. For consumers with substance abuse or mental health problems, social workers, psychiatric nurses, and substance abuse counselors could be important members of the team. Health educators, psychologists, and behavioral health practitioners might be key resources for addressing behavior change and mental health issues.

- The consumer should have a lead role in deciding who is on the care team, which might also include family, friends, and neighbors. Cash and counseling programs, which provide consumers with a monthly allotment and give them control over hiring their own personal care providers, are early demonstrations of consumer-directed care in the arena of long-term supports and services.

Examples of Care Team Design

Commonwealth Care Alliance (CCA), a Massachusetts health plan, uses an integrated care team approach in which the care manager is a clinician, who can treat the patient and authorize services, e.g., physical therapy, etc. The concept for this care team was developed out of the discovery that the needs of most complex patients are not met during the standard three to four office visits per year. CCA envisioned the care manager as someone who could intervene between visits to assist patients in meeting their goals. Each patient is evaluated and assigned to a type of care team based on need. The core care team is composed of the care manager (typically a nurse practitioner and the team lead), a medical assistant (helps patients to make appointments, arrange transportation, and fill prescriptions), a primary care practitioner, and a behavioral health practitioner. This team works with the patient to ensure needs are met by accompanying patients to office visits, offering on-site behavioral health treatment, conducting home visits, referring patients to specialists, and linking patients and their families to valuable community resources.

Cambridge Health Alliance (CHA), an integrated health system in Massachusetts, uses a planned care model led by the care coordinator who plays a "navigator" role, rather than a clinical role. The care team is composed of a physician, a nurse, a medical assistant, a nutritionist, a social worker, and the planned care coordinator. The care coordinator uses a registry to identify patient needs or gaps in care and will follow up with each individual patient to check in on health status, schedule an appointment, or send a reminder for a test, etc. Using this system of a planned care team, CHA reports an increase in the eye appointment rate for diabetics from 54 percent to 74 percent. Similarly, in one year CHA reports a reduction in asthma-related emergency room admission from seven percent to under two (1.78) percent.[19]

- Experts and practitioners in the field differ over the best model for organizing the care team and responsibilities of its members. Some argue that each member of the care team needs to be engaged in developing the care plan and coordinating with others on the care team. Others say there can be more of a hub and spoke model — with a "go to" person leading much of the development and coordination of the care plan with input from the other parties.

"Go To" Person

One of the biggest problems in the current system is the lack of coordination of health care resources around the consumer. This is in large part due to a reimbursement system that generally pays providers for single episodes of sick care, defined by traditional office visit codes. A "go to" person should be matched with each consumer with multiple chronic conditions (and reimbursed accordingly) to help consumers connect, navigate, and interact with the delivery system.

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[19] Interview with Laureen Gray, Planned Care Project Director, Cambridge Health Alliance, June 14, 2005.

- The "go to" person might be a care manager, patient advocate, health care buddy, medical assistant, social worker, or another player in the health care system (see box below). The physician will have a key role, but will probably not be the "go to" person responsible for care management. Nurses are well-suited to the role, but might need additional training in key areas, such as behavior change techniques, motivational interviewing, and assessing patient activation.

Examples of the "Go To" Person

Whatcom County. Clinical specialists who are nurses or social workers help consumers draft a care plan and coordinate with providers.

Cambridge Health Alliance. Planned care site coordinators act as buddies for patients and are instrumental in getting patients to appointments and helping them deal with a range of issues.

MaineHealth. Non-nurse care managers are assigned to practices. They work across diseases, but tend to focus on diabetes since it is the focus of current quality initiatives.

Partners. Health coaches (provided through a contract with a vendor, Health Dialog) work with up to 1,000 Medicaid consumers with chronic conditions. Coaches provide self-management support, make social service referrals, and help consumers navigate the health care system.

- The "go to" person would help consumers solve a variety of problems, whether clinical, behavioral, or even social, in some cases, not in the standard benefit package. Two major responsibilities of the "go to" person would be working with consumers to develop the care plan and organizing and directing the care management process. The "go to" person would develop a shared care plan, coordinate providers, and identify consumer needs spanning beyond the traditional medical model.

- The specific skills and background of the "go to" person will depend on the needs of the consumer. For example, two program models (see Figure 2), one developed by the Cambridge Health Alliance and the other by the Commonwealth Care Alliance in Massachusetts, have stratified the "go to" person profile based on the complexity or risk level of the patient.[20,21]

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[20] Interview with Robert Master, MD, President, Commonwealth Care Alliance, June 14, 2005.

[21] Interview with Laureen Gray, Planned Care Project Director, Cambridge Health Alliance, June 14, 2005.

Figure 2: Care Management Program Models

Organization	Type of Patient	Type of "Go-To" Person
Cambridge Health Alliance		
	Less complex patients	Buddy or coach
	Psycho-socially complex	Social worker
	Medically complex	Physician and nurse care manager
Commonwealth Care Alliance		
	Low-risk	Monitored through ongoing data surveillance
	Moderate-risk	Nurse with physician consultation
	High-risk	Nurse practitioner providing care at home

- The approach taken by the "go to" person needs to be adapted to the culture, lifestyle, and preferences of the specific consumer. The importance of identifying and addressing racial and ethnic disparities as well as building cultural competency into care management cannot be understated.

Medical Home

A "medical home" for all Medicaid consumers is critical, but the definition of the medical home may need to be rethought in light of consumers with multiple chronic conditions to ensure that it is flexible and adaptive enough to meet their needs. The "go to" person will complement but not replace the medical home. Purchasers, health plans, and policymakers should carefully consider the following:

- The medical home for consumers with multiple chronic conditions needs to be very different from the traditional physician's office. Ideally, it will adopt a more holistic approach to chronic care — including components such as a shared care plan, planned care visits, information systems to support alerts and reminders, and better referral systems.

- The practice specialty of the coordinating physician, the skills and background of the "go to" person, and the composition of the care team will vary depending on the needs and severity of the patient. While a primary care provider will be the medical home for many Medicaid consumers, a specialist may be better suited to serve some, especially those with complex conditions.

- Some have suggested that a new kind of specialist — an "outpatient intensivist" — may be needed to serve as the medical home for consumers with especially complex chronic conditions. This provider would be a "specialist" in a new way, having expertise in health behavior change and extensive training across specialties rather than deep knowledge of one practice area.

Care Intervention

Care intervention is a central component of any successful chronic care management program. Successful care interventions should be focused on addressing medical, social, and behavioral issues. Interventions can vary in intensity and length and often depend on the severity and complexity of the conditions. Patients can be stratified by risk and assigned interventions accordingly.

- Telephonic care management is most often used in managing care for lower risk individuals. Calls from lay care managers are used to provide basic health education information, monitor adherence to medications, support behavior change, assess changes in health status, and answer any questions. Some studies have shown that this method of care management reduces hospitalizations and improves health outcomes (please note these studies did not include Medicaid consumers).[22] Compared to the most intensive care management methods, telephonic outreach is relatively inexpensive to maintain on an ongoing basis (although it requires an upfront investment in the infrastructure/technology).

- Nurse care management is an effective way to manage health care for the high-risk chronically ill population. Nurse care managers might combine home visits with face-to-face meetings at the provider's office and telephone calls. These sessions are used to discuss care plans, develop self-management goals, and assist the patient in coordinating her care. While this high-touch method is significantly more resource intensive than telephonic intervention alone, the two methods combined have proven to be successful in improving health status for individuals with multiple chronic conditions (as noted previously, these studies did not include Medicaid consumers).[23]

- Pharmacy management will be critically important for consumers with multiple chronic conditions. States have tended to pursue pharmacy utilization management and care management approaches separately. Good models for integrating the two are needed. Properly managed, much of this population may see a substantial increase in medication usage. Accordingly, the clinical pharmacist will play an important role on the care team and in ensuring that patients are on the appropriate medications. Kaiser Permanente will soon implement such a model for patients at high-risk for cardiovascular disease. Identified at-risk patients will be automatically placed on a set of drugs per a clinical protocol agreed to by physicians, pharmacists, and patients. A program in Missouri, which pairs primary care providers and clinical pharmacists to jointly develop pharmacy management plans for chronically ill patients, has shown good initial results in terms of cost savings.[24] The state plans to blend this pharmaceutical approach with a multi-component program that will include

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[22] B. Reigel, B. Carlson, Z. Kopp, B. LePetri, D. Glaser, A. Unger, "Effect of a Standardized Nurse Case-Management Telephone Intervention on Resource Use in Patients With Chronic Health Failure, " *Archives of Internal Medicine* 162 (March 2002): 705-712.

[23] C.B. Taylor, N. Houston Miller, K. Reilly, G. Greenwald, D. Cunning, A. Deeter, L. Abascal, "Evaluation of a Nurse-Care Management System to Improve Outcomes in Patients with Complicated Diabetes," *Diabetes Care* 26, no. 4 (April 2003): 1058-1063.

[24] Missouri Medicaid Pharmacy Program, http://www.heritage-info.com/mocaidrx/dm/index.htm (26 September 2005).

nurse care management. On January 1, 2006, the Medicare Part D drug benefit will take effect and Medicaid consumers that are dually eligible for Medicaid and Medicare will no longer receive their pharmacy coverage through Medicaid. States are concerned that they will no longer have access to pharmacy claims data, which will significantly undermine their ability to manage the aspects of care of the dual eligibles for which Medicaid will retain responsibility. It will be critical to preserve access to these data, especially for those with multiple chronic conditions, which is the majority of dual eligibles.

- An essential element for an intervention involving a complex population is the successful integration of physical and behavioral health. In many health care systems, these two pieces are siloed resulting in data fragmentation and poor communication between physical and behavioral health providers. However, there are systems that have recognized the division between the two systems and have created innovative models for integration (see box at right).

CareSouth's Integration of Physical and Behavioral Health

CareSouth, a community health center in South Carolina, successfully integrated primary care and behavioral health. Every patient is screened by the primary care physician, and if a behavioral health need is identified, that patient is immediately referred to a behavioral health clinician. This model allows the care team to address the needs of the patient on the spot without having to schedule a future appointment. The primary care physicians are supportive of this practice because it allows them to focus their time with the patient on physical health needs alone.

Consumer Role

A more activated and engaged consumer should be at the heart of chronic disease improvement efforts. The prevalence of chronic disease has, in recent years, prompted researchers and practitioners to rethink the roles of consumers, physicians, and other health professionals in treating these conditions.[25] Because chronic conditions are not remedied by a quick trip to the doctor's office, but require ongoing management and behavior change, consumers can play a much larger role in their own care.

Recently, practice change models emphasizing the role of consumers in managing health have received widespread attention from both academicians and clinicians. Enabling consumers to take control of their own health through changes in "diet, exercise, self-measurement, and medication use"[26] is seen as an effective way to improve health outcomes, reduce pressures on the health care system, and meet consumer needs. An environmental scan conducted by RAND's Evidence-Based Practice Center for people with hypertension or diabetes showed that self-management interventions could have a significant positive effect on health outcomes.[27] Consumer direction has gotten the attention of several states, e.g., Florida, South Carolina, and West Virginia. As part of their broader reform efforts, these states seek to expand consumer direction and responsibility and are requesting CMS approval to create vehicles such as health investment accounts for Medicaid consumers that reward them for healthy choices, such as accessing preventive services.

While it is important to test greater consumer involvement in health care decisions, it is also important to move cautiously to ensure that consumers have the information they need to make the best decisions.

While it is important to test greater consumer involvement in health care decisions, it is also important to move cautiously to ensure that consumers have the information they need to make the best decisions. It is one thing to ask people with frailties and disabilities (who out of necessity tend to be very engaged in managing their care) to make decisions about selecting personal care workers in the Cash and Counseling programs; it is considerably more complex to ask them to navigate the health care system to make informed choices about their medical care.

Overall, lack of patient-centeredness in existing chronic care initiatives was mentioned by a broad spectrum of experts in our interviews. The issue manifests itself in at least two ways. First, most initiatives focus on a single disease and do not address multiple conditions. Second, the patient voice and perspective are often missing in the care management process. It is also worth noting that some feel that the consumer must be the one to initiate taking more responsibility in managing his or her health rather than relying on the system to reorganize itself around the consumer.

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[25] H. Holman, K. Lorig, "Patient Self-Management: A Key to Effectiveness and Efficiency in Care of Chronic Disease," *Public Health Reports* 119, no. 3 (May-June 2004).

[26] T. Bodenheimer, E.H. Wagner, K. Grumbach, "Improving Primary Care for Patients with Chronic Illness," *Journal of the American Medical Association* 288, no. 14 (9 October 2002): 1775-9.

[27] The Center for Advancement in Health, "Essential Elements of Self-Management Interventions," http://www.cfah.org/pdfs/Essential_Elements_Report.pdf (11 March 2005).

Future Direction

- Solutions must address the need for a focus on multiple conditions. The organizing entity (e.g., health plan, provider network, health system etc.), the medical home, and "go to" person must devise a more integrated approach to care management. One possible approach is to identify patients with particular "improvable" diseases, but design a care management process that works "upstream" and "downstream" to address co-morbid conditions, lifestyle issues, and underlying behavioral issues. Another is to design interventions for patients with a given cluster of chronic conditions. Both approaches will require greater fluidity, adaptability, and responsiveness in care management approaches.

- Solutions must include the patient perspective. New strategies to engage consumers about their own goals, needs, and preferences are needed. This will require carefully testing different consumer-driven approaches as there has been only minimal work in this area to date and there is little evidence about what works best. However, many experts believe that there is considerable potential for incorporating consumer preferences and priorities to guide the composition of the care team (including the role and involvement of the patient's family), the care management approaches used, and, most importantly, what health issues and problems take priority.

- That said, it is unrealistic to expect the consumer to drive the whole process. The health care system is so complicated and this population has such complex needs that it may not be realistic to view consumers as the "drivers" of all aspects of their care. Even assuming consumers do want to play this role, it is unfair to ask them to do so until clinical, quality, and cost information that is transparent, robust, and free flowing exists to allow them to make informed decisions and actively drive their health care. There are initiatives underway that are building this information base, particularly in the area of electronic patient health records (see box on next page).

- A patient health record can motivate more patient-centered care management. Many people use the term "patient centered care," but care management structures do not necessarily reflect this philosophy. Whatcom County, Washington took this concept literally and decided to include consumers as consultants in all phases of project planning for its chronic care initiative. Patients involved in this planning process felt that the standard medical record was missing important information about the consumer's environment, the consumer's goals, how the consumer likes to learn, and who the consumer views as essential to the care team. Whatcom County decided to develop an alternative model (see box below).

Whatcom County's Patient Health Record

Whatcom County developed a new patient-generated health record including patient-generated information describing the care team, listing prescription drugs, and outlining preferred ways of learning as well as short- and long-term goals. Patients can create the patient health record on their own or with the help of a care manager. Its use has changed the dynamic between physician and patient. Armed with documentation of their preferences and goals, patients find that doctors are more willing to listen to, learn about, and incorporate the patient perspective. A demonstration of the patient record can be viewed at www.sharedcareplan.org.

- Improving consumer self-management will require a flexible and skilled approach. Many Medicaid consumers with multiple chronic conditions, as well as fundamental social and economic challenges, may not be ready to be "activated." Patient engagement and empowerment will require trust building over time and a flexible, not rules bound, approach. Training for care managers and others promoting self-management skills will be key and should draw from emerging findings and techniques on behavior modification and readiness to change.

- Another good way to ensure that care management is patient-centered is through home visits. By seeing consumers in their own homes, the "go to" person or care manager can appreciate the consumer's environment and context, as well as their values.

Financing and Incentives

Any redesign of the health care delivery system needs to consider better ways to align incentives with quality of care. One alignment strategy is through "pay for performance," which is gaining popularity in health systems across the country. As of March 2005, there were 104 pay-for-performance programs being developed or implemented across the country.[28] These programs are generally sponsored by health plans or employer purchasing coalitions. They compensate physicians and other members of the care team with both financial and non-financial rewards for both process (annual foot exam for diabetics) and outcome (improving hemoglobin A1c values for diabetic members) measures. Financial incentives include performance-based reimbursement, bonuses, and payment for specific achievements or outcomes on quality measures.[29] Non-financial incentives can range from simple recognition to encouraging consumers to switch to higher performing providers. Although a few state Medicaid agencies and health plans are experimenting with these approaches, most of the current pay for performance initiatives around the country reside in the commercial realm.

One critical issue for Medicaid managed care organizations is how to gain leverage for chronic care improvement with providers. For a health plan that is instituting a new incentive program it may be very difficult to get buy-in from enough providers to make the program effective. Additionally, the Medicaid population is different from the commercial population, so goals and benchmarks should be adjusted to reflect those differences.

Through the national Rewarding Results program, seven Medicaid managed care plans in California are working to develop financial and non-financial incentives for providers and members to improve the quality of and access to pediatric preventive care services. The primary incentives target well-baby visits and adolescent well care visits. A complementary measure rewards medical groups based on the volume, timeliness, and quality of electronic encounter data. Although not targeted to chronic illness care, the publication of the external evaluation of this project, available in 2006, will contribute to the ongoing discourse about incentives in Medicaid managed care.

Meanwhile, providers are being asked to do different things and develop different resources for each purchaser — an unworkable situation. There are several potential strategies Medicaid can use to enhance collaboration among purchasers, and thereby lessen the burden on providers. One is to adopt protocols and quality strategies in Medicaid chronic care initiatives that have been embraced by other purchasers. Maine, for instance, is trying to build on the pay for performance approaches developed by a collective of the state's purchasers.

For several years, Medicaid programs have been looking for ways to use incentives to

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[28] G. Baker and B. Carter, "Provider Pay-for-Performance Incentive Programs: 2004 National Study Results," (Med-Vantage, Inc.: 2005).

[29] Bailit Health Purchasing, LLC, "Ensuring Quality Providers: A Purchaser's Toolkit for Using Incentives," National Health Care Purchasing Institute, May 2002, http://www.bailit-health.com/articles/index/shtml (26 September 2005).

align payment and quality. States are using direct financial incentives to reward Medicaid managed care plans for superior performance on standardized measures of quality and satisfaction. New York distributed close to $13 million to health plans from September 2004-August 2005 as a part of its Quality Incentive Program, which allows for performance payments of up to one percent (increasing to three percent in future years) of each plans' Medicaid managed care capitation rate. In the next year, incentive payments will be nearly $40 million.[30]

One of the New York plans, Health Now, has, in turn, developed an internal system to reward physicians for their performance on a variety of measures, including HbA1c results, nephropathy testing, and eye exams for diabetics, and preventive screenings.[31] Another example, though not for chronic illness care per se, is Rhode Island. For the past six years, the state has linked financial incentives to a series of 21 measures and just recently expanded to 31 indicators of quality including both HEDIS and CAHPS measures.

Some states are also rewarding high performing plans through the auto assignment of new members. This strategy directs enrollment of Medicaid members (who have failed to select a health plan on their own) to these high performing plans. For example, Michigan, New Mexico, and New York are testing this form of incentive. In Michigan, there are two auto-assignment tiers based on network/access capacity and quality of care as determined by HEDIS scores (immunization, well child visits, timeliness of prenatal and postnatal care, and HbA1c testing for diabetes), with the average auto-assignment rate around 40 percent. It is worth noting that auto-assignment will only be an attractive incentive to managed care plans if the capitated rates are properly risk adjusted. The importance of accurate risk adjustment in rate setting and program design cannot be underestimated and is a particularly critical component in the design of any care management program for Medicaid consumers with multiple chronic conditions and/or disabilities.

Future Direction

A systematic approach to chronic care is the right thing to do, but there is not a short-run business case for it in the current financing environment.

A systematic approach to chronic care is the right thing to do, but there is not a short-run business case for it in the current financing environment. Because chronic care initiatives are more likely to result in long-term, rather than short-term, savings, champions will often have more success advancing them as quality initiatives than as cost-saving approaches. This is a tough sell in today's cost-cutting environment. Organizations are encouraged to focus instead on the long-term investment potential of these initiatives, and the intrinsic social and economic value of improving the health status of consumers with chronic needs.

- Moreover, even if efforts do result in cost savings, there will likely be winners and losers, at least in the short term, until we find a better way to pool resources and potential savings and to reallocate the dollars to reward quality.

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[30] Joseph Anarella, Assistant Director, New York State Bureau of Quality Management and Outcomes Research (November 8, 2005 e-mail correspondence).

[31] J. Verdier, L. Felland, S. Felt-Lisk, F. Smieliauskas, J. Wong, *Quality-Related Provider and Member Incentives in Medicaid Managed Care Organizations*, Center for Health Care Strategies (July 2004).

- In parallel, the business case analysis must be expanded beyond health care costs to include a broader economic and social case that assesses the impacts on worker/student absenteeism, productivity, and progression of disability. Shifting the mindset to consider enrollees (who may or may not be part of the target population) as "pre-members" whose high-risk behaviors or conditions put them at risk for chronic conditions and who may be part of any payer's system at any given time reinforces the importance of expanding the business case analysis.

- Resources are needed to build the infrastructure and organizing function. New financing strategies might still be directed at providers, but must also motivate behaviors and interventions for the whole care team, not just the physician. This will require finding a way to "collectivize" small care sites. North Carolina has done this by paying regional physician collaboratives (rather than individual doctors), a strategy that is also being tried in British Columbia. Another approach, which Maine hopes to try, involves paying providers a monthly care management fee (larger than the typical primary care case management [PCCM] payment) if they are willing to play the "organizer" function.

- Providers need to get paid more for doing more comprehensive chronic care, particularly as it relates to consumers with multiple chronic conditions. Disease management vendors are realizing that they need to use financial incentives for providers to foster collaboration and to recognize the provider's role in improving chronic illness care. In Washington, one of its vendors, Renaissance Health Care, Inc., is offering incentives to physicians who provide lab values related to end stage renal disease. In another example, Indiana Medicaid implemented a new code to reimburse for non-provider group visits.

- Lack of integration of Medicare and Medicaid financing streams (and other purchasers) poses multiple challenges. Many Medicaid enrollees with multiple chronic conditions are either dual eligibles or are in the two-year transition to Medicare, heightening the importance of finding some way for Medicare and Medicaid to work together. States are concerned that implementation of Medicare's Part D (and other parts of the Medicare Modernization Act) will further fragment care, potentially create a budget drain on Medicaid because of the clawback provisions, and make identification of the target population more difficult if Medicaid no longer receives real time, accessible pharmacy utilization data.

- In the end, not much can be accomplished without substantially aligning the underlying financial incentives. Obviously, this is a big, unwieldy issue, but we must start paying providers for keeping people well. Financing and reimbursement innovations have tended to lag behind programmatic innovation. Policymakers and, potentially, foundations should underwrite the design of financing innovations in this area as the programmatic models for better care management processes are being developed. Such innovations might include paying chronic care providers for keeping patients out of the hospital, investing in effective behavior change strategies for so-called "pre-members," integrating Medicaid and Medicare services and financing, and adopting similar incentives and reimbursement approaches across purchasers.

Organizing Entity

In an ideal world, some type of "organizing entity" would serve to synchronize stakeholders and coordinate all of the components of care. Questions remain, however, about what type of entity can best fill this role in different environments. It does seem clear, however, that the more the organizing entity bears the risk and can pool the resources for patients with multiple chronic conditions, the better chance the entity has to break through barriers and achieve meaningful integration. The fully capitated managed care organization remains the most obvious structure for achieving this level of financial integration and leverage. This will likely require new financing mechanisms.

The fully capitated managed care organization remains the most obvious structure for achieving financial integration and leverage.

Specific functions of the organizing entity would include setting priorities for chronic care improvement, bringing together stakeholders; aligning incentives and financing (and, ideally, holding risk); designing and managing IT and data systems; synthesizing and communicating important information about a consumer to all relevant providers (or making it possible for providers to talk to each other in a streamlined and straightforward manner); working to educate and engage consumers in their care; and hiring and managing "go to" people (e.g. nurses or social workers).

Examples of Organizing Entities

Regional Physician Networks – Payments from Medicaid support North Carolina's regional physician networks that hire care managers and initiate quality improvement efforts. Monthly payments of $2.50 per member are made to the network as well as to the participating primary care provider.

Large Safety Net Provider – The Cambridge Health Alliance — a safety net system composed of hospitals, ambulatory care sites, and local public health — hires care managers and is launching an electronic medical record to link ambulatory care components.

Health Care System – A community hospital or system can act as a leader in the community to bring together stakeholders and build a care management infrastructure. Two examples of this are Bellingham Hospital (Washington) and Maine Health (Maine).

Medicaid – In Indiana, the Medicaid program acts as the organizing entity by bringing together health information technology, provider collaboratives, nurse care management, and telephonic care support. In Washington, Medicaid plays this role by contracting with two commercial disease management vendors to operate a program including telephonic and nurse care management.

Health Plan – Managed care plans often have the organizational, informational, and coordination capabilities required of an organizing entity. They also have the strongest incentives for improving health status and preventing costly exacerbations of chronic disease. An intriguing variation would involve a health plan "leasing" care management and organization functions to a state for the PCCM or fee-for-service Medicaid population.

Future Direction

- Several types of organizations might serve as the organizing entity. These could include health plans (many of which already perform these functions), provider networks, Medicaid agencies, or health systems.

- Flexible approaches will work best. Some providers see the organizing function as their role and have some of the needed resources already in place. If purchasers determine that this is the case, reimbursement mechanisms should be realigned to support those providers in performing this organizing function. Needed first, however, is a mechanism for assessing which strategy is workable in different locations and how multiple strategies can be combined. In one example, Maine is considering allowing provider sites that already have nurse care managers to bill Medicaid for these services under new care management codes. The state would then provide care managers (under contract with a vendor) to work with sites that do not have these resources.

- Other providers may not be able to fill these new roles but should be integrated into the process. Many care sites do not have the needed capabilities (or desire to develop them) and are already stretched too thin. For these providers, the care management and other support functions should be organized externally and integrated back with primary care. Even if the organizing entity and "go to" person are external to the primary care provider, these providers will still play an important role in introducing the chronic care model, contributing to the care plan, facilitating linkages to outside services and supports, providing referrals to specialty care, and initiating discussions about behavior change.

- New mechanisms are needed to finance the "go to" function. The traditionally nominal PCCM payments will not be sufficient to cover coordination and integration functions. Some states might consider increasing payments within a PCCM-type system for providers serving more complex patients and who have an interest in developing the "go to" function. In other cases, the "go to" persons might be deployed from another base, possibly community hospitals, plans, or disease management organizations (any of which might also be an organizing entity). In a given state or community, both practice-based and non practice-based models might exist side-by-side depending on providers' patient volume, interest, and capabilities.

Conclusion

This environmental scan is just the first step in CHCS' efforts with its partners at Kaiser Permanente, The Robert Wood Johnson Foundation, and the 10 *MVP: HSCCC* teams to foster dramatic improvement in the care of people with multiple chronic conditions. It is clear that too little is known about the make-up of this comorbid population within Medicaid. What are their primary medical problems, but also their underlying behavioral health, social, and supportive service challenges? What is the scope and severity of the various combinations — or clinical clusters — of these conditions? That is only the first set of questions, to which we have tried to supply some initial answers. Next come the questions of where and how are they getting what care? It is increasingly evident that more needs to be done.

We have probed the states, managed care plans, disease management organizations, integrated delivery systems, and providers who have begun to wrestle with this problem. Early innovators are developing methods to better identify and stratify their high-risk populations with multiple chronic conditions and are implementing outreach and treatment interventions that put the patient and his or her particular needs at the center of care design. Building upon these early lessons and those from the Chronic Care Model[32] and various disease management approaches that have been adapted by Kaiser Permanente and other innovative health care organizations across the country, we hope that the 10 *MVP: HSCCC* teams will take us another step toward delivering the right care to these patients at the right time. We believe that rapid cycle quality improvement approaches — such as those developed and used with providers by the Institute for Healthcare Improvement and Improving Chronic Illness Care and with health plans in Medicaid by CHCS with its Best Clinical and Administrative Practices model[33] — will be the vehicles for helping these 10 early innovator teams lead the nation toward better systems of care for its most complex and chronically ill citizens.

Addressing this major root cause of Medicaid's burgeoning growth will result in a program that delivers increased value through improved health care quality and more effective targeting of resources for our nation's most vulnerable individuals, today and for future generations. These advancements will benefit not only those in Medicaid, but also those in Medicare and the commercially insured. Americans will be living longer with more chronic illnesses, frailties, and disabilities — it is incumbent upon the nation's health care system to focus on getting their care right.

Addressing this major root cause of Medicaid's burgeoning growth will result in a program that delivers increased value through improved health care quality and more effective targeting of resources for our nation's most vulnerable individuals, today and for future generations.

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[32] E.H. Wagner, "Chronic Disease Management: What Will it Take to Improve Care for Chronic Illness?" *Effective Clinical Practice* 1 (1998): 2-4.

[33] K.L. Brodsky and R.J. Baron. "A 'Best Practices' Strategy to Improve Quality in Medicaid Managed Care Plans," *Journal of Urban Health* 77 (December 2000): 592-602.

Appendix A: Interview List

NAME	TITLE	ORGANIZATION
Gerry Anderson, PhD	Director	Partnership for Solutions
Richard Baron, MD	Physician	Greenhouse Internists
Ray Baxter, PhD	Senior Vice President	Community Benefit, Kaiser Permanente
John Benz	Strategic Business and Development Officer	Memorial Healthcare System
Bob Berenson, MD	Senior Fellow	Urban Institute
Laureen Biczak, DO	Medical Director	MaineCare (Maine Medicaid)
Kate Bones	Senior Project Manager	Institute for Healthcare Improvement
Tom Bodenheimer, MD	Professor	University of California at San Francisco
Sophia Chang, MD	Director of Chronic Disease Care	California HealthCare Foundation
Allen Dobson, MD	President and CEO	Cabarrus Family Medicine
Tim Ferris, MD	Director, Pediatric Quality Improvement	Partners Healthcare System, Inc
Michael Garrett	Vice President, Business Development	Qualis Health (QIO)
Laureen Gray	Planned Care Project Director	Cambridge Health Alliance
Jimmy Hara, MD	Family Practice Residency Director	Kaiser Los Angeles Medical Center
Denise Levis Hewson	Director of Quality Improvement	Community Care of North Carolina (North Carolina Medicaid)
Bob Hurley, PhD	Associate Professor	Virginia Commonwealth University
Tom Inui, MD	President and CEO	Regenstrief Institute
Andrea Kabcenell	Executive Director for Pursuing Perfection	Institute for Healthcare Improvement
David Labby, MD	Vice President	CareOregon
Lisa Letourneau, MD	Director of Clinical Integration	MaineHealth
Marty Levine, MD	Chief of Geriatric Services	GroupHealth Cooperative
Anne Lewis	CEO	CareSouth Carolina
Doug Libby	Executive Director	Maine Health Management Coalition, Inc.
Alice Lind	Care Coordination Manager	Washington State Department of Social and Health Services
Bob Master, MD	President	Commonwealth Care Alliance
Kathy Moses	Chronic Disease Director	Indiana Office of Medicaid Policy and Planning
George Oestreich, PharmD	Director, Pharmacy Program	Missouri Division of Medical Services
Marc Pierson, MD	Executive Director	Whatcom County's Pursuing Perfection Project
Marc Rosenman, MD	Research Scientist	Regenstrief Institute
Michael Rothman	Senior Consultant	University of Mississippi Medical Center
Pat Rutherford	Vice President	Institute for Healthcare Improvement
Christobel Selecky	Executive Chairman	LifeMasters Supported SelfCare, Inc.
Lois Simon	Chief Operating Officer	Commonwealth Care Alliance
David Stevens, MD	Quality Improvement (Commission Corps)	Agency for Healthcare Research and Quality
Warren Taylor, MD	Director of Chronic Conditions Management	Kaiser Permanente Northern California
Diana Verrilli	Director, Strategic Marketing	McKesson Health Solutions
Sandeep Wadhwa, MD	Vice President of Government Programs	McKesson Health Solutions
Ed Wagner, MD	Director	Improving Chronic Illness Care
Paul Wallace, MD	Executive Director	Care Management Institute, Kaiser Permanente
Wendy Wolf	Executive Director	Maine Health Access Foundation
Dawn Wood, MD	Vice President, Corporate Medical Director	WellPoint

Appendix B: Expert Panel

NAME	TITLE	ORGANIZATION
Sophia Chang, MD	Director, Chronic Disease Care Programs	California HealthCare Foundation
Donna Checkett	Senior Vice President, Medicare & Medicaid Programs	Schaller Anderson, Incorporated
Stephanie DeKemper	President	Centene Foundation
Sandra Foote	Senior Advisor, Chronic Care Improvement	Centers for Medicare and Medicaid Services
Mark Gibson	Deputy Director	Center for Evidence Based Policy, OHSU
Bob Hurley, PhD	Associate Professor	Virginia Commonwealth University
Warren Jones, MD	Distinguished Professor of Health Policy	University of Mississippi Medical Center
Doriane Miller, MD	Program Director, Co-Management Learning Network	Rush University/Stroger Hospital of Cook County
George Rust, MD	Interim Director	National Center for Primary Care at Morehouse School of Medicine
Karen Scott Collins, MD	Deputy Chief Medical Officer	NYC Health and Hospitals Corporation
Chris Selecky	Executive Chairman	Disease Management Association of America
Richard Sheola	President, Public Sector Division	Value Options
Sandra Shewry	Director	California Department of Health Services
Marshall Thomas, MD	Vice President, Medical Services	Colorado Access
Ed Wagner, MD	Director	Improving Chronic Illness Care
Andrew Webber	President and Chief Executive Officer	National Business Coalition on Health
Morris Weinberger, PhD	Professor	UNC School of Public Health
Dawn Wood	Vice President, Corporate Medical Director	WellPoint State Sponsored Business

CHCS Center for Health Care Strategies, Inc.

P.O. Box 3469
Princeton, NJ 08543-3469
(609) 895-8101
(609) 895-9648 fax

www.chcs.org