
Issue Brief



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Disease Management: The New Tool for Cost Containment and Quality Care

Summary

Faced with tight fiscal constraints and soaring Medicaid budgets, states are pursuing new strategies to reduce the cost of caring for patients with costly chronic diseases. Chronic diseases, such as cardiovascular disease (principally heart disease and stroke), asthma, cancer, and diabetes, are among the most prevalent, costly, and preventable of all health problems.¹ Seventy-eight percent of the nation's total medical care costs, including almost 80 percent of total Medicaid expenditures, can be attributed to the treatment of chronic conditions.² "Disease management" (DM) provides a strategy for states to improve patient health outcomes and limit health care spending by identifying and monitoring high-risk populations; helping patients and providers better adhere to proven interventions; engaging patients in their own care management; and establishing more coordinated care interventions and follow-up systems to prevent unnecessary health complications.

Medicaid managed care companies, serving primarily women and children, have used DM programs and their associated tools and techniques for years in the Medicaid program. Observing the successful application of such programs under their managed care contracts, many states are beginning to attempt DM programs on the fee-for-service side of the Medicaid program, which primarily serves the more chronically ill, aged, blind, and disabled recipients.

States can "buy," or outsource, DM programs by contracting with vendors, also known as Disease Management Organizations (DMOs); "build" DM programs by developing their own in-house systems; or work with pharmaceutical companies to develop cost-saving strategies, including DM initiatives, that guarantee Medicaid savings. Build strategies provide states with the opportunity to pursue systemic reforms in their care systems that can reduce costs and produce continuous improvements in care quality. Vendors make outsourcing DM strategies appealing by absorbing the startup costs of their programs and placing their fees at risk in contracts that guarantee savings of 1 percent to 5 percent in the cost of caring for the diseases they manage.³ Pharmaceutical companies also help some states afford new DM ventures by providing or financing cost saving strategies, including DM services, and guaranteeing the resulting Medicaid savings.

More than 20 states are currently developing and implementing Medicaid DM programs.⁴ Although there is limited quantitative research to assess the impact of state efforts, early reports indicate that DM programs have contributed to quality improvements in Medicaid and to limited cost savings.⁵ Prompted by their experience on the managed care side and reports of the potential of disease management, states are pursuing DM programs in hopes of curbing current Medicaid spending growth, improving health outcomes, and reaping greater savings in the future.

Whether they are built or purchased, successful disease management programs:

- Are based on evidence-based strategies,
- Manage the whole population or use control groups to demonstrate savings,
- Anticipate and manage co-morbidities,
- Help doctors adhere to evidence-based care strategies *and* engage patients in their own care management, and
- Measure outcomes and focus on continuous quality improvement.

The following issue brief outlines the promise and potential complications of DM strategies and offers a review of those state programs that have outcome data, or outcome projections, for their initiatives.

Background

Chronic diseases are among the most prevalent, costly, and preventable of all health problems. Seven out of every ten American deaths (1.7 million) each year occur as a result of a chronic disease, and chronic conditions cause major limitations in activity for more than one in every ten Americans.⁶ The costs associated with treating the suffering and disability caused by chronic diseases account for 78 percent of the nation's total medical care costs, including almost 80 percent of Medicaid expenditures.⁷

According to the definition offered by the Partnership for Solutions, chronic conditions last a year or longer, limit what one can do, and may require ongoing medical care.⁸ Common examples include cardiovascular disease (principally heart disease and stroke), cancer, diabetes, asthma, and human immunodeficiency virus/acquired immune deficiency syndrome (HIV/AIDS).

The number of Americans suffering from chronic diseases is increasing rapidly. Chronic conditions affecting children, such as asthma, obesity, and diabetes, are on the rise, and chronic conditions are becoming more prevalent as the population ages and longevity increases. As the elderly age, they also face greater risks of having multiple chronic conditions, which complicates their care and dramatically increases their healthcare costs. Currently, 125 million Americans, 45 percent of the population, suffer from at least one chronic condition. Approximately 60 million people, or 48 percent of the people with chronic conditions, have more than one chronic illness.⁹ By 2020, an estimated 157 million Americans will have a chronic condition, and 81 million of those people (25 percent of the population) will suffer from multiple chronic conditions.¹⁰

The cost of providing health care for chronic conditions is a large and increasing burden for those who suffer from them and for public health care budgets. Today, people with chronic conditions account for 76 percent of hospital admissions, 88 percent of all prescriptions filled, and 72 percent of all physician visits.¹¹ Total yearly medical expenditures are two times greater for a person with a chronic condition than for an individual without chronic conditions, and 14 times greater for someone with five or more chronic conditions.¹² In 1990, chronic conditions caused \$234 billion in lost workplace productivity.¹³ In 2000, direct medical costs for treating chronic diseases reached \$510 billion and are expected to increase to \$1.07 trillion by 2020.¹⁴

Most importantly for states, 39 percent of the Medicaid population has one or more chronic conditions, and the cost of treating chronic diseases accounts for almost 80 percent of total Medicaid expenditures.¹⁵ Because Medicaid spending accounts for nearly 20 percent of state budgets and Medicaid spending growth is one of the key drivers of current state budget deficits, states should be keenly interested in efforts to limit health care spending on their most costly Medicaid recipients—the chronically ill. Disease management systems are designed to reduce health care costs, prevent unnecessary health complications, and improve health outcomes for the chronically ill.

Limitations of the Current Care System

Our current health care system is designed to treat patients experiencing episodes of acute illness and is not organized to engage patients and providers in an ongoing relationship to manage chronic illnesses. Several structural limitations lead to costly and avoidable health complications for the chronically ill.

- Individuals with chronic conditions often have complex needs that require services from many unrelated providers. Poor care coordination leads to conflicting treatment recommendations, adverse drug interactions, and unnecessary hospitalizations and nursing home placements.¹⁶
- Patients and providers often fail to work together to set goals and engage patients in their own care management. As a result, patient compliance with recommended therapy remains low.
- Medical advancements have established evidence-based practices to prevent or minimize complications from chronic diseases. However, busy health care providers are unable to keep pace with the volume of research and emerging best practices. Recent surveys suggest that fewer than half of U.S. patients with hypertension, depression, diabetes, and asthma are receiving appropriate treatment.¹⁷
- The lack of continuous follow-up and feedback between patients and providers allows critical warning signs and changes in health status to go undetected and untreated, leading to costly and unnecessary complications.

Promise of Disease Management

Disease management (DM) strategies are designed to correct the structural deficiencies in the current care system, improve care quality and health outcomes, and reduce costs by:

- identifying high-cost and high-risk patients;
- educating those patients and empowering them to become better engaged in their own care management;
- improving provider awareness and adherence to evidence-based care strategies; and
- establishing more coordinated care interventions and follow-up systems to prevent unnecessary health complications.

State DM programs target the most costly diseases in their Medicaid population and those that offer the greatest potential for savings from improved provider practices and patient self-management. DM programs most often target asthma, congestive heart failure, diabetes, HIV/AIDS, and hypertension. Medicaid managed care companies have used DM programs and their associated tools and techniques for years in the Medicaid program. Many states are now beginning to attempt DM programs on the fee-for-service side of the Medicaid program, which primarily serves the more chronically ill, aged, blind, and disabled recipients.

Disease management programs vary in design but often include: educating providers and supporting their efforts to adhere to evidence based practice guidelines; assisting physicians in monitoring patients; enhancing patient self-management and adherence to treatment plans; providing feedback to the healthcare provider and patient; establishing communication and collaboration among providers and between the patient and providers; and measuring outcomes.¹⁸ More specifically, such programs use disease registries to track and monitor patients, engage physicians in training on evidence based best practices; provide decision support systems to help providers adhere to practice guidelines; employ nurses, pharmacists, dieticians, respiratory therapists, psychologists, and other providers to supply patient

case management and education; and support patients through counseling, home visits, call centers with 24-hour patient supports, and appointment reminder systems.¹⁹

States can “buy” DM programs by contracting with vendors, also known as Disease Management Organizations (DMOs), “build” DM programs by developing their own in-house systems, or work with pharmaceutical companies to develop guaranteed savings strategies, including DM initiatives. Some states use several of these strategies concurrently to assemble a combination of strategies to best meet their needs. No matter how they are structured, DM programs are most effective when doctors adhere to evidence-based care strategies *and* patients engage in their own care management.²⁰ Studies indicate that there is very little evidence that case management conducted by phone, independent of the physician’s practice, is effective.²¹

Buy Strategies

Buy strategies allow states to contract with companies that specialize in developing effective DM strategies, instead of having to develop their own efforts. Some vendors help physicians adhere to current evidence-based treatment protocols, but most limit their scope to helping patients better manage their own care, monitoring patient progress, and establishing a feedback loop between patients and providers.

One of the key benefits of buy strategies is that states can ask vendors to put 100 percent of their fees at risk in contracts that guarantee net savings of 1 percent to 5 percent of the current cost of treatment for the disease being managed. States can also ask vendors to absorb the startup costs of their DM programs over the course of the contracts, and can avoid having to develop DM strategies on their own.²²

However, states pursuing buy strategies face the challenge of finding the vendor with the appropriate mix of services that engage the physician community and with structuring contracts to properly specify expected outcomes and measurement systems. Contracting is also a time-consuming process, and states vary in their ability to negotiate the best terms. Some states have found that risk-based contracting sets up an adversarial relationship between the vendor and the state and leads to protracted negotiations on how to define and measure guaranteed savings. As a result, some states (Florida and Colorado) are eliminating the risk component of their contracts. States pursuing buy strategies still also face some implementation costs, including personnel costs for program and data administration.

Build Strategies

Building disease management strategies engages states in more labor-intensive efforts than contracting with vendors. However, build strategies also offer states the opportunity to partner with providers to pursue more systemic reforms in the delivery of care for the chronically ill. Some states train providers, such as pharmacists, to track and counsel patients on diet, exercise, nutrition, the importance of following medication instructions, and other strategies to improve health outcomes. Others work with physicians to improve their adherence to evidence-based care strategies or engage entire health care practices in efforts to redesign their delivery systems to provide more proactive, coordinated care for the chronically ill. More comprehensive efforts include establishing collaborative partnerships among health departments, social services, Medicaid, and providers to better manage the Medicaid population (see North Carolina example below).

States can pursue build strategies without having to develop entire programs from scratch. States can assemble DM systems by purchasing existing tools and programs (decision support systems, disease registries, vendor based case management systems, etc.) and building remaining components. The drawback of build strategies is that they take so much longer to design and implement, do not allow states to put an outside entity at risk for savings, and require states to set up their own DM businesses. States must often hire program administrators and health care personnel to design effective programs; hire data experts and technology personnel to design and manage effective tracking and measuring systems; and invest in the information technology systems that track and measure patient progress.

Working with Pharmaceutical Companies

In addition to the build and buy options, three states are working with pharmaceutical companies to develop or fund cost-saving strategies, including DM programs, that will guarantee Medicaid savings and improve health outcomes (see Colorado, Florida and North Carolina examples, for details). The drawback is that pharmaceutical companies may focus on improving health outcomes through the improved use of pharmaceuticals, so states should ensure that negotiations include provisions for more comprehensive disease management services focusing on both providers and patients.

Difficulties with Disease Management Programs

Developing successful DM programs is complex in any setting. It is difficult to measure and prove the effectiveness of such programs; patients and providers often resist participation; physicians often don't have the infrastructure or technology to track and monitor patients; and patients often suffer from multiple chronic conditions, which complicates program design.

Implementing DM programs in Medicaid is further complicated due to the limitations of Medicaid data systems, shifts in Medicaid eligibility and enrollment, the personal barriers that often affect the Medicaid population, and the difficulty measuring impact as Medicaid programs pursue so many cost saving mechanisms concurrently. Furthermore, Medicaid programs must also work with the Center for Medicare and Medicaid Services (CMS) to determine whether their DM strategies require a Medicaid plan amendment or a waiver. The waiver process can be time consuming and delay implementation, so early discussions with CMS are advised. Table 1 outlines the complications of implementing DM programs and offers potential solutions that states have pursued.

State Experiences and Options

More than 20 states are engaged in developing and implementing Medicaid DM programs. To date, limited quantitative research has been conducted to assess the impact of state programs. Early reports from programs that have conducted assessments indicate that DM programs have contributed to quality improvements in Medicaid and to some cost savings.²³ Most health plans employing DM strategies are far more certain that disease management programs improved the satisfaction of members who participated in them than they are about the effects of the program on outcomes or costs.²⁴ However, some state programs have demonstrated improved health outcomes and reduced care costs from the DM strategies, and many states are continuing to expand their efforts in hopes of even greater future savings.

States are pursuing DM initiatives through all three strategies (build, buy, and agreements with pharmaceutical companies), and some are assembling programs by putting together elements of the best practices from each of these strategies concurrently. North Carolina has built a new health care delivery infrastructure to better manage the Medicaid population and is hoping to use funding from pharmaceutical companies to expand those efforts. Florida has pursued vendor-based solutions and has established agreements with pharmaceutical companies that will guarantee \$49 million in Medicaid savings. Colorado is pursuing vendor based strategies financed solely with funding from pharmaceutical companies. Mississippi, Virginia, Washington, and West Virginia are pursuing both build and buy strategies. The following section summarizes the experiences of those states that have outcome data for their initiatives.

Buy Strategies

Florida

Florida was one of the earliest adopters of Medicaid disease management. Since 1999, Florida has been contracting with vendors for DM programs and now has contracts in place for HIV/AIDS, hemophilia, diabetes, asthma, cancer, congestive heart failure, chronic kidney disease, and hypertension. In general,

Table 1. Potential Problems and Solutions Associated with Disease Management Programs	
Potential Problems	Possible Solutions
<p><u>Data limitations</u> Medicaid data systems are often inadequate to identify appropriate DM participants. Faulty coding in data records leads to false positives and negatives (falsely identifying recipients as needing treatments and failing to identify those who do). States also have great difficulty getting Medicaid data into a disease registry or decision support system.</p>	<p><u>States can:</u></p> <ul style="list-style-type: none"> • work with physicians, social services, public health facilities, and hospitals to screen and refer patients directly into appropriate programs; and • use nurse care managers to make followup calls to validate computer-generated assessments. • Adopt existing disease registry and decision support systems and input their data.
<p><u>Challenging population to serve</u> Medicaid recipients are often transient, may lack transportation, telephones, or Internet access, move in and out of eligibility, and may have mental health problems, substance abuse issues, or cognitive barriers, including difficulties with reading proficiency, making it difficult to find and track them and difficult for them to follow DM protocols. (However, DM programs have found that Medicaid participants have outcomes equal to, if not better than, the general population).²⁵</p>	<p><u>Health plans and vendors have:</u></p> <ul style="list-style-type: none"> • hired locators to find people; • given recipients direct-connect mobile phones, or have used videos to convey information; • coordinated transportation or offered house calls; • provided appointment reminder systems; • extended services temporarily after Medicaid eligibility lapses and reminded recipients to renew coverage; and • written materials at the third-grade to fourth-grade level.
<p><u>Difficult to measure effectiveness of DM programs</u> Demonstrating program outcomes is complicated by difficulties in establishing appropriate baseline comparison data due to fluctuations in Medicaid enrollment and costs each year. It is also difficult to demonstrate the effectiveness of a DM intervention due to patient turnover, general medical inflation, regression to the mean (the statistical tendency of last year's most expensive members to move toward the group average the following year), and the need to indicate what outcomes would have occurred absent the intervention. Furthermore, the benefits or savings from the program may occur in the future.</p>	<p><u>Solutions include:</u></p> <ul style="list-style-type: none"> • setting measurable goals, designing effective evaluation strategies, and spelling out evaluation methodology in contracts; • using control groups instead of comparisons to prior data to measure impact, or managing the entire effected population to avoid cherry-picking. • controlling for patient turnover, general medical inflation, and regression to the mean in measurement systems. • working with consultants to establish unbiased measurement terms in contract negotiations.
<p><u>Physician and patient participation</u> Physicians may resist vendor intrusion in their practices, as well as physician education programs. Medicaid recipients may not elect to participate in DM programs, preventing programs from having a large impact.</p>	<p><u>States can:</u></p> <ul style="list-style-type: none"> • partner with physicians in designing DM strategies and provide incentives, such as Continuing Medical Education credits, for training programs. • automatically enroll patients in DM programs and provide a time period in which they can opt out.
<p><u>Medicaid Regulations</u> DM strategies often require a plan amendment or waiver; waiver process can delay implementation.</p>	<p><u>States can:</u> Initiate early conversations with CMS to share program plans and determine which route to pursue.</p>
<p><u>Co-morbidities</u> Patients with chronic diseases often suffer multiple illnesses that must be managed concurrently.</p>	<p><u>States can:</u> Account for co-morbidities in program design or use a limited number of vendors that manage multiple diseases and life issues</p>
<p><u>Risk-based contracting</u> Placing vendor fees at risk creates an adversarial relationship between purchasers and vendors and can lead to disputes about whether expected outcomes were actually achieved.</p>	<p><u>Purchasers and vendors can:</u></p> <ul style="list-style-type: none"> • specify program design, expected outcomes, and evaluation methods in the contract; • use third parties to reconcile data; or • eliminate risk-based contracting.

Florida officials believe that the programs have been successful in generating improvements in care quality and modest expenditure reductions.

As an early adopter, Florida ran into many barriers in establishing effective strategies in its Medicaid population. In the early days, vendors were not as adept at managing people with multiple chronic conditions; recipients were difficult to identify, locate, track, and manage; and contracts sometimes failed to establish explicit methods for measuring cost savings. The DM vendors worked with the state to implement creative solutions to each barrier, many of which are outlined in Table 1.

In 2001, an independent evaluation of Florida's asthma program conducted by MGT of America indicated that DM led to a modest overall net savings for the state. As a result of the program, average asthma-related inpatient hospital costs for program participants declined by \$70.86 per month, from \$545.92 to \$484.40; average asthma-related outpatient costs for program participants declined by \$38.06 per month, from \$79.40 to \$39.41. Asthma-related prescription drug costs for program participants increased by \$158.84 per month. However, asthma-related expenditures account for only 18 percent of total Medicaid expenditures for program participants, and total Medicaid expenditures for program participants decreased by 33% or \$3,524.90 per participant.

An independent evaluation conducted by Georgetown University and Florida State University also documented reductions in medical claims costs of 38 percent for hemophilia and 39.7 percent for HIV/AIDS programs when measured against previous expenditures adjusted for inflation. When compared to non-participants in the DM program, however, the reductions in costs were not statistically significant—1.1 percent lower claims costs for hemophilia participants than non-participants and 2.4 percent lower claims costs for HIV/AIDS participants than non-participants.

However, the analysis of the hemophilia and HIV/AIDS programs underestimates program benefits as analysis was limited to measuring the impact of care management interventions for beneficiaries. The analysis of participants to non-participants does not account for DM interventions targeted to physicians or other administrative services provided by DM vendors. For example, claims analysis in HIV/AIDS led to implementation of pharmacy controls by the agency, which resulted in substantial savings for selected products during the first year of the HIV/AIDS DM programs that were not accounted for in the above analysis.

Build Strategies

Community Health Centers and the Chronic-Care Model

States are already benefiting from a broad-based effort to reform chronic-care services in community health centers. The Bureau of Primary Health Care (BPHC) is engaged in the Health Disparities Initiative (HDI), a major effort to improve the quality of chronic illness care for their 10 million clients. The HDI uses two models to organize and guide its improvement work. The first, the Breakthrough Series, developed by the Institute for Healthcare Improvement, provides a structured learning environment for health center teams to work collaboratively on improvement. The second, the Chronic Care model, developed by the MacColl Institute for Healthcare Innovation, guides the transformation of care systems from being episodic and reactive to being comprehensive and proactive. The Chronic Care Model focuses on reforming care at the community, organization, practice, and patient levels.

Participating health centers commit teams of senior leaders, physicians, nurses, technicians, and front-line staff to work with national experts over a 12-month period to bring about rapid improvements in chronic care. These teams attend three highly interactive two-day sessions to learn about best practices in chronic care and methods for implementing and testing those practices at home. Topics include engaging patients in self-care, integrating evidence-based practices in day-to-day practices of primary care providers, developing data systems to track patient and population progress, changing the design of delivery systems to better coordinate care, and collaborating with community programs and organizations to better support

the chronically ill. Over the 12-month period, teams implement changes, collect data, submit reports, and receive ongoing feedback and technical assistance from the national experts.

Thus far, over 350 health centers have participated in training collaboratives to improve diabetes, asthma, depression, and cardiovascular disease care. As a result of the diabetes collaborative, 23 participating health centers serving 8,030 patients reduced average blood sugar (hemoglobin, or HbA1c) levels from greater than 9.0 in March 1999 to close to 8.0 in July 2001.²⁶ Studies indicate that a 1 percent reduction in HbA1c levels can translate into annual cost savings of \$685-\$950 per patient.²⁷ In addition, during the asthma collaborative, 18 health centers serving more than 1,200 asthma patients increased the number receiving appropriate treatment with anti-inflammatory medications from 10 percent to 70 percent.²⁸ Future collaboratives have been planned in cancer, disease prevention, and infant mortality, along with continued work in the previous chronic disease areas.

North Carolina

The North Carolina Department of Health and Human Resources is building upon Carolina Access, its Primary Care Case Management (PCCM) program, to create the Community Care Plan, a state and local partnership responsible for managing the Medicaid population. The Community Care Plan, also known as the Access II and Access III programs, is a system of community health networks, organized and operated by local doctors, hospitals, health departments, and departments of social services. These networks share accountability for delivering high-quality, cost-effective care. In exchange, the state provides technical assistance, provider education, standardized tools to support best practices, and funding to support local networks.

The state currently employs approximately 10 full-time equivalent (FTE) positions to support local networks. State staff includes physicians to support efforts to establish clinical best practices; nurses to train local networks in consistent care and case-management strategies; and statisticians and information technology experts to focus on system design, technology, and tracking and measurement issues. Salaries total approximately \$850,000 and are supported half by foundation grants and half by Medicaid funding. Each practice participating in the PCCM program receives \$2.50 per member per month in case-management fees. Access II and III networks have created nonprofit administrative entities that receive an additional case-management fee of \$2.50 per member per month to support the system infrastructure (e.g., salaries for a medical director and case managers, rent for office space).

Since 1998, partners in 10 local networks covering 15 counties have been working together to improve quality, contain costs, and improve care coordination for 235,000 Medicaid recipients. The program has since expanded to 12 networks with approximately 300,000 enrollees. Each Access II and III network assesses patient utilization and risk data to identify high-risk and high-cost patients, channels those patients into appropriate disease management and case-management strategies, tracks patient and provider outcomes, and uses data to continuously improve provider practices.

A key element of the success of this model is that physicians drive the clinical-improvement process through a statewide clinical leadership group, and they develop the programs that operate in local sites. Local sites can develop their own care-improvement programs and work on systemwide efforts, as they are doing with asthma and diabetes disease management. In the case of asthma DM, each practice has agreed to follow the National Institutes of Health (NIH) asthma guidelines and has identified an internal champion to lead their clinical-improvement effort. The state hired asthma specialists to educate providers about evidence-based best practices and provides standardized support tools, such as asthma action plans. Local case managers also work with asthma specialists, physicians, and staff to help in outreach, patient education, provider education, monitoring, and evaluation.

An initial evaluation of the asthma program showed that Access program enrollees under age 21 had a 34 percent lower hospital admission rate in 2001 than the control group and an 8 percent lower emergency department rate. Even with higher pharmacy costs, due to increased awareness of the effectiveness of

anti-inflammatory drugs, the average episode cost for children enrolled in Access was 24 percent lower than for those not enrolled in the program (down from \$853 to \$687 per episode of care).

Over the next fiscal year, the Community Care Plan program has also committed to save \$29 million in Medicaid expenditures through managing pharmacy benefits; improving clinical performance in asthma and diabetes; implementing new initiatives for high-risk obstetrics patients and for patients with congestive heart failure and multiple chronic conditions; and by working with Medicaid patients to strengthen primary care physician relationships to mitigate unnecessary use of emergency rooms. The state would also like to expand the geographic coverage of the Access program over the next two years to serve the majority of North Carolina's Medicaid recipients.

Revamping the health system infrastructure in this manner is a more labor-intensive model than contracting with vendors. However, leaders in North Carolina view this strategy as building the infrastructure necessary to make permanent improvements in care quality. The model also creates the ongoing capacity for the state to address multiple care-improvement strategies as sites work together on continuous improvement in a range of issues.

Build-and-Buy Combination Strategies

Mississippi

Mississippi received a Medicaid state plan amendment to reimburse pharmacists for providing health care-related services in cooperation with the patient's physicians. Diseases covered include diabetes, asthma, hyperlipidemia (excess fat or lipids in the blood), and coagulation. Under the plan, a physician may refer a patient to a credentialed pharmacist for drug therapy management. The pharmacist will evaluate the patient, review drug therapy with the doctor, and educate the patient about managing the disease and sticking to the drug regimen. The goal is to reduce emergency room visits and unnecessary hospitalizations. The plan amendment allows for Medicaid payment of \$20 for a session with a pharmacist. Medicaid will pay pharmacists for up to 12 visits per patient per year.²⁹

In addition, Mississippi is initiating contracts for Medicaid DM programs for asthma, diabetes, and hypertension. These contracts are designed to improve patient and provider knowledge and understanding of their diseases and risk factors; reduce unnecessary emergency department visits and hospitalizations; improve health outcomes; and improve adherence to national, evidence-based guidelines.

Vendors contracting with Mississippi will assess patients; work with patients, providers, and families in the development of individual plans of care for each patient; conduct case-management and care-coordination services; and promote patient self-management. The state expects at least a 5 percent guaranteed of net savings and will pay vendors a per member, per month fee.

Virginia

The Virginia Health Outcomes Partnership (VHOP) was designed by Virginia Medicaid to help health care providers decrease inappropriate prescribing practices and increase patient adherence to treatment plans. Using seed money from the National Pharmaceutical Council, Virginia Medicaid partnered with health care providers, academia, and the pharmaceutical industry to design and implement disease management strategies. Virginia focused initially on asthma DM and designed training strategies to improve patient-provider communication and strengthen provider adherence to asthma treatment guidelines.

Physicians in the Virginia Medicaid Primary Care Case Management system with at least one asthma patient were recruited for participation in a six-hour training program delivered through the university system. Incentives for participation included free courses that conveyed Continuing Medical Education Category 1 credits, free asthma education teaching kits and materials, and waivers of mandatory prior authorization requirements.³⁰ Workshops presented state of the art guidelines for managing asthma,

recommendations for asthma drugs, and instructions on how to communicate more effectively with asthma patients.

After the training intervention, participating physicians were often provided with lists of asthma patients to help them identify those needing education and improved treatment. Physicians were also given frequent feedback about how their asthma patients were fairing with respect to emergency room visits, hospitalizations, and cost experience. An evaluation of VHOP found that emergency room visits per 1,000 patients declined by 41 percent over a six-month period among asthma patients treated by DM-trained physicians, versus an 18 percent decline for patients of physicians who had not received the training.³¹ Furthermore, dispensing of recommended drugs increased by as much as 25 percent, and there was an estimated \$3 in savings for every \$1 spent.³² Further projections indicated that if VHOP had been implemented statewide for all PCCM physicians, it could have saved as much as \$1.2 million in spending for emergency and urgent care claims during the five post-intervention quarters.³³

Given the successes of this intervention model, the pilot program was discontinued early and replaced with a statewide, outsourced DM model. The number of diseases was expanded and the educational efforts were combined with a pharmaceutical care management approach. After more than three years of experience, Virginia recently issued a Request for Proposals to further expand its DM program in 2003 and has projected a \$20 million savings from the program.

Washington

Qualis Health, the Washington State Department of Health, and Improving Chronic Illness Care, a national program of the Robert Wood Johnson Foundation, have instituted two diabetes training collaboratives, using the Chronic Care Model. Over the last three years, provider practices (private offices and clinics, hospital clinics, health care delivery systems, and health plans partnered with medical clinics) have sent teams of three to six people to participate in the training. In total, 47 participants have been trained.

As a result, participants have reported improved patient glycemic (hemoglobin, HbA1c) control and blood pressure control, increased screening for the complications of diabetes, and increased patient self-management and satisfaction. From 1999 to 2001, the average HbA1c values for patients were reduced from 8.4 percent to 7.8 percent. Using data from a study on the effect of improved glycemic control, which indicated an average cost savings of \$685-\$950 per patient per year for patients with a 1 percent decrease in HbA1c, Washington is projecting a cost savings of \$234,270-\$324,900 among 342 patients whose HbA1c decreased by at least 1 percent from 1999-2001.³⁴ Furthermore, using a model based on other studies, Washington computed a 12.6 percent reduction in diabetes deaths, 8.4 percent reduction in heart attacks, 7.2 percent reduction in strokes, 25.8 percent reduction in amputations, and a 14.4 percent reduction in kidney failure.³⁵

Given their success with the diabetes collaborative, Washington is also pursuing a Preventive Services collaborative focusing on diabetes screening, influenza and pneumococcal vaccinations, mammography and Pap smears, and tobacco-cessation counseling.

In addition, Washington is contracting with two vendors (McKesson and Renaissance) to target DM services to Medicaid recipients with asthma, diabetes, congestive heart failure, and renal disease. The projected cost savings after paying vendor fees, but not including the state costs related to implementation, are about \$2 million. Costs related to implementation include two professional staff persons, half-time secretarial support, contracting fees with the Disease Management Purchasing Consortium, and actuarial fees of \$30,000. After these costs, the program should still provide net savings far in excess of the projected \$600,000 established in the budget.

Partnering with Pharmaceutical Corporations

Colorado

Colorado recently launched a disease management and care-coordination project for its Medicaid population, funded entirely by \$1.75 million in contributions from pharmaceutical corporations. Colorado is targeting asthma, diabetes, schizophrenia, breast and cervical cancer, and high-risk infants through vendor-based contracts. In addition, Colorado has contracted for an overarching care-management organization to coordinate all DM programs and to establish a system for identifying clients for participation. In total, the state has used donations from seven pharmaceutical corporations to secure nine DM contracts within an eight-month timeframe.³⁶

Colorado decided not to pursue risk-based contracting in order to avoid time-consuming contract negotiations over complex savings guarantees and to avoid future battles over whether targeted goals were achieved. Colorado Medicaid will pay vendors for services rendered, track savings, and retain all savings generated. The demonstration will last 12 months to 18 months.³⁷ Following the demonstration, the Medicaid department, vendors, and independent reviewers will conduct a return-on-investment analysis.

By using donated funds from the private sector, the state has also been able to avoid federal Medicaid requirements and changes to the state plans. No state general funds and no federal matching dollars have been used, which gives the state the freedom to be creative and move swiftly.³⁸

Florida

In addition to its vendor based strategies, Florida has established guaranteed savings agreements with two pharmaceutical corporations. In June 2001, Florida reached an agreement with Pfizer Health Solutions for the company to offer DM services, health literacy training, and expanded drug donation programs for Medicaid patients with asthma, diabetes, hypertension, and congestive heart failure. Pfizer agreed to guarantee that these programs would generate \$33 million in Medicaid savings over two years. Pfizer will have to pay the difference if the \$33 million in savings are not achieved. In exchange, the state agreed to include Pfizer drugs on the Medicaid preferred-drug list without requiring supplemental rebates (rebates in excess of those mandated by the Medicaid Rebate Agreement) on their pharmaceuticals.

The state later reached a similar agreement with Bristol-Myers Squibb (BMS) that will provide guaranteed savings of \$16 million. BMS will provide a health-management program targeted primarily to African American and Hispanic Medicaid recipients with diabetes and depression. Culturally-competent educational interventions are an integral part of the program, but participation is not restricted based on race or ethnicity.

North Carolina

North Carolina would like to expand its Community Care Plan (Access II and III programs) statewide over the next two years (see above). Two large pharmaceutical corporations recently donated \$3.5 million to the Access program to support the expansion of the Community Care Plan. Estimates indicate that it would require approximately \$9.5 million to establish six new networks and expand the seven existing networks to add more than 400,000 enrollees and 57 counties. In the current tight budget cycle, state funds are limited and it is unclear whether enough corporate contributions will be offered to support a roll out of this magnitude or whether funds must be used for more moderate expansions of existing programs.

Considerations for States

States considering a strategy to improve chronic disease management in their Medicaid population have several considerations to keep in mind, depending on the strategy they pursue.

Buy Strategies

States pursuing vendor-based strategies should consider:

- how Medicaid policies, reimbursement regulations, and data systems need to be changed and improved to support DM strategies;
- whether vendor has received accreditation, is using evidence based DM approaches, and can show outcome data (clinical, financial, and satisfaction outcomes) demonstrating effectiveness of their services.
- whether the vendor can manage co-morbidities and pursue innovative strategies to locate, monitor, and communicate with Medicaid recipients;
- whether vendor has sufficient interaction with the doctors caring for Medicaid patients to influence treatment and follow up and whether vendor can establish a strong feedback loop between patients, physicians, and case managers;
- whether the vendor has the data capacity to track care and develop necessary outcome reports;
- whether the vendor agrees with the state's proposed baseline data, outcome expectations, and evaluation strategies (which becomes particularly important when vendor fees are at risk and disputes arise regarding outcomes).
- whether the vendor can demonstrate savings by using a control group or by taking care of the full population so that there is no cherry picking of last year's highest care utilizers.
- whether they want the vendor to put fees at risk for meeting guaranteed savings targets or whether they want to develop a more collaborative relationship with the vendor.
- whether the vendor can absorb program start up costs over the course of the vendor contract;

Build Strategies

States pursuing build strategies should consider:

- how Medicaid policies, reimbursement regulations, and data systems need to be changed and improved to support DM strategies;
- what level of resources and staff they have available to dedicate to an ongoing, collaborative initiative;
- whether they can limit the labor intensive process of building a program from scratch by using an assembly process—purchasing existing programs or adopting existing best practices where possible and building remaining components;
- how they will engage physicians and pique their interest in partnering with the state to reform care systems and institute evidence-based chronic care strategies;
- whether community health centers in the state are already participating in the BPHC program to introduce the Chronic Care Model and whether those efforts could be broadened to affect other Medicaid and public health systems; and
- whether stronger partnerships between Medicaid, Public Health, social services, and providers could lead to more holistic approaches to managing patient care.

Partnerships with Pharmaceutical Companies

States pursuing partnerships with pharmaceutical companies to support their DM initiatives face different considerations depending on whether the pharmaceutical company is acting as a DM service provider or whether the company is simply providing funding to support DM services.

- States using pharmaceutical companies as DM providers should examine whether the services will include the full spectrum of disease management and care management services or whether services will be focused only on drug utilization.
- States using donations from pharmaceutical companies to fund DM services should consider whether such funding will be available to sustain programs in future years.

Resources for States

States can utilize several external resources to help them design and implement effective DM strategies. The following resources are available to those building, buying, or assembling a combination of DM efforts.

Buy Strategies

States pursuing buy strategies can utilize organizational resources like the following:

- The National Business Coalition on Health offers a standardized health plan request for information (RFI), which can be used to collect detailed information about DM programs, including their use of population identification techniques, monitoring mechanisms, patient and provider interventions, and specific outcome measurements.
- The Disease Management Purchasing Consortium and Advisory Council (DMPC) identifies, purchases, and assists in implementation of outsourced disease management programs for states and health plans. DMPC can also advise health plans on overall disease management strategies and helps suppliers design disease management programs.
- The National Pharmaceutical Council (NPC) offers a web site specifically dedicated to Medicaid disease management (www.dmnnow.org) and offers complimentary technical assistance to state Medicaid programs, on a limited basis through their consultants, to help states design and implement appropriate quality assurance, utilization management, and operational systems initiatives.

Build Strategies

States pursuing build strategies can seek the type of assistance offered by the following:

- Improving Chronic Illness Care, the national Program of the Robert Wood Johnson Foundation, helps organizations interested in improving chronic illness care by bringing organizations together in improvement collaboratives, offering targeted research grants and technical assistance, supplying tools to support patients and practitioners, and supplying a bibliography of evidence-based research (see www.improvingchroniccare.org).
- States can also go to www.healthdisparities.net to gather BPHC training manuals, curricula, videos, public awareness materials, and sample patient forms, and to download a disease registry system.

The above are some examples of the types of resources and organizational resources available to assist states in developing disease management programs. In addition, states interested in developing a statewide action plan for preventing and managing chronic diseases through any strategies that they care to pursue should consider applying for the NGA Policy Academy on Chronic Disease Prevention and Management. NGA will sponsor travel for participating states to send teams of health policy makers from the executive and legislative branches and the nonprofit community. Teams will work with national experts over a three-day period to develop a customized action plan for their state. In March 2003, NGA will issue a Request for Proposals to participate in the Academy, which will be held in early August.

Conclusion

In an era of escalating state budget deficits and runaway Medicaid expenditures, states must look for new ways to manage Medicaid costs. Disease management systems offer one of the few opportunities to curb or reduce spending without limiting Medicaid enrollment, cutting benefits, increasing premiums or copayments (cost sharing), or reducing provider reimbursement rates, all of which may limit access to care. In contrast, DM systems can help states achieve Medicaid savings by imposing strategies to bolster

health care quality and improve health outcomes for the chronically ill. States pursuing DM strategies, whether they are built, bought, or arranged in partnership with pharmaceutical companies, can reduce Medicaid costs, or at least curb spending growth, while helping chronically ill patients lead healthier, more productive lives.

Endnotes

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