Disease Management and the Medicare Modernization Act: “It’s the Insurance, Stupid”

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ABSTRACT

While definitions of “disease management” (DM) emphasize quality of care for populations with chronic illness, proponents argue it reduces healthcare costs. Buyers may find disease management organizations’ (DMOs’) use of clinical guidelines, physician collaboration, and promotion of patient self-management intuitively sound, but it is performance guarantees, combined with retrospective effectiveness cost studies, that have driven DMOs’ penetration of the commercial insurance market with revenues that exceed $500 million per year. The success of DMOs contributed to the creation of the Chronic Care Improvement Program (CCIP), which is designed to prospectively test the impact of DM on both the quality and cost of care for fee-for-service Medicare beneficiaries with chronic illness. This may lead to an expansion of DM in Medicare, and even greater opportunities for DMOs beyond the $10 billion in 10-year projected growth. For community-based physicians caring for patients with chronic illness, the sharpened focus on chronic care and the growth of DMOs creates some potential advantages. These include more time to treat more patients with acute illness, lower practice costs, opportunities to collaborate over quality, and a greater ability to achieve quality targets set by pay-for-performance arrangements. (Disease Management 2005;8:xxx–xxx)

INTRODUCTION

Almost nine years ago, Sherwood and Epstein predicted the growth of disease management (DM) because of its approach to “maximizing functionality; minimizing disease, disability, and death; and improving the efficiency and cost-effectiveness” of health care. Since then, revenue among approximately 160 disease management organizations (DMOs) has grown from $68 million in 1997 to $500 million in 2000, and is projected to reach $10 billion by 2010. There are three ways for DMOs to obtain accreditation, including the National Committee on Quality Assurance (NCQA), the American Accreditation Healthcare Commission (previously known as Utilization Review Accreditation Commission), and the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO). The industry is represented by its own advocacy organization, the Disease Management Association of America (DMAA). DM also has become a topic of numerous academic, policy, and trade group meetings and is the focus of a peer-reviewed journal by the same name.

The nation’s largest health insurance provider has not been immune to growing interest in DM. The Centers for Medicare and Medicaid Services (CMS) currently oversees several
Medicare DM demonstration projects, and has sent guidance to state Medicaid directors about how states can cover DM in their Medicaid programs. Calling DM “an exciting opportunity to significantly improve the care delivered to Medicaid beneficiaries with chronic illness,” CMS’s guidance letter encourages the state directors to take advantage of the opportunities DM programs offer, “to provide coordinated, cost-effective care that improves the health of Medicaid beneficiaries.”

The integration of DM into Medicare also was a goal of the Bush administration’s efforts to reform Medicare. The Medicare Modernization Act (MMA) contains numerous provisions designed not only to further test and identify ways to incorporate DM into Medicare, but also to lay the groundwork to require its inclusion in both fee-for-service and managed care Medicare.

This paper explores the underpinnings contributing to the remarkable growth of DM and its popularity among insurers. We also will examine the support for DM within the private sector and among many public policy makers, and assess the research on whether it reduces medical costs. We also look at some of the challenges ahead for policy makers, lingering barriers to the integration of DM into traditional health care, implications for physician practices, and the impact of the new Medicare legislation.

**DEFINITION OF DISEASE MANAGEMENT**

Definitions abound, but the DMAA defines DM as “a system of coordinated healthcare interventions and communications for populations with conditions in which patient self-care efforts are significant.” DMAA outlines six components that make up “full service” DM programs, including use of (1) population identification processes, (2) evidence-based practice guidelines, (3) collaborative practice models, (4) patient self-management education, (5) process and outcomes measurement, evaluation, and management, and (6) routine reporting/feedback loop. DM programs emphasize the care of targeted “populations” defined by a triggering diagnosis and accept responsibility for all health outcomes.

Following the “backlash” against traditional utilization management, DM is arguably a natural response to government and commercial insurer interest in higher value and less variation in healthcare delivery. Costs are not addressed in the DMAA definition but as we shall see below, it is the principal reason why DM may be destined to become a multibillion dollar industry.

**CHALLENGE OF CHRONIC ILLNESS**

On average, healthcare spending for a person with a single chronic illness is two times greater compared to someone without chronic care needs, while spending for someone with five or more chronic conditions is 14 times as great. Individuals with chronic conditions account for 88% of all prescriptions filled and 72% of all physician visits. While the majority of people with chronic illnesses are of working age and privately insured, the care and treatment of individuals with chronic illness also drives up costs in the Medicare and Medicaid programs. For example, in 1999, 32% of beneficiaries with either congestive heart failure (CHF) or diabetes accounted for 75% of Medicare spending, while about 80% of Medicaid resources are spent on people with chronic conditions.

There also are significant gaps in caring for these individuals. Half of Americans with chronic illnesses receive needed preventive care, proven treatments are inconsistently adopted, and usual practice is plagued by poor communication, discontinuity of care, failure to follow up on known abnormal tests, poor charting, and mistakes in knowledge or skills. While local quality improvement (QI) programs are widely used, this approach alone has not addressed the systematic deficiencies in information management, healthcare consumer participation, and payment mechanisms pervasive in health care today. In contrast, assuming the DMAA definition of DM is applied to populations of patients with illnesses like diabetes or CHF, DMOs seek to overcome these deficiencies by promoting best practices, pa-
tient self-management, and physician and patient feedback.

Yet poor quality and its attendant costs alone fail to account for the rise of DM among commercial insurers. We argue below that a key feature that fueled its growth is its underappreciated role in managing insurance risk.

INSURANCE RISK AND THE ROLE OF QUALITY

Health insurers cover the cost of future expenses for predefined healthcare services (defined as the “benefit”) in exchange for a payment today (defined as the “premium”). Calculating an adequate premium includes an assessment of the covered population’s health status, provider care patterns, and local competition. A description of the methods used in calculating the premium are outside the scope of this paper, but it is important to note that insurers’ calculations do not incorporate any of the commonly used measures of quality used by physicians and health administrators in day-to-day QI.

Not only is the actuarial calculation of the premium insulated from quality, but researchers have found little relationship between the type of health insurance (managed care versus indemnity) and quality measures. Mammography rates are higher among managed care enrollees, but hypertension and diabetes care is unaffected by insurance type and some aspects of multiple sclerosis treatment may be better in fee-for-service (FFS) settings. Given the apparent lack of any link between quality, insurance type, and the premium, it is little wonder that healthcare insurers have been widely perceived as resistant to including quality in defining the benefit, calculating the premium, or setting physician and hospital reimbursement.

RISK SEGMENTATION, CHRONIC CARE, AND THE RISE OF DISEASE MANAGEMENT

Physicians and patients alike are aware that health insurers apply different payment streams for different segments of the delivery system. Examples include primary care, specialty care, inpatient services, rehabilitation, pharmacy, durable medical equipment, and mental health. Each has distinct patient and provider behaviors, incentives, and drivers of utilization. Insurers manage each with varying combinations of capitation, patient copays, benefit exclusions, and payment ceilings.

Yet, DM has ushered in a new insurance segment involving “chronic illness” that cuts across these payment streams. DMOs argue their business model moderates the insurance risk for insured populations defined by a chronic illness. Their interventions include those recommended by many quality experts, including enabling patient self-care, case management, promoting clinical guidelines, measurement, and feedback.

There is scant information in the medical literature regarding the contractual relationships that exist between health insurers and DMOs (a “carve out”) or the details behind health insurers’ ownership of DM programs (a “carve in”). DMO carve-outs commonly involve acceptance of a fixed fee per patient or a fraction of the premium on a per member per month (PMPM) basis. In exchange, DMOs typically commit to performance guarantees, such as reducing the claims expense below what is projected and improving quality measures, such as those described in the Health Plan and Employer Data and Information Set (HEDIS). It is unlikely that DMOs would have achieved any degree of market penetration based—whatever its merits—on the promise of improving quality of care alone. Instead, it is the insurers’ interest in tomorrow’s return (reduced claims expense) on today’s investment that has fueled the willingness to finance DM.

DOES DISEASE MANAGEMENT REDUCE CLAIMS EXPENSE?

Despite acceptance by many insurers that DM saves money, this is still being debated. A recent analysis by the Congressional Budget Office (CBO) noted, “There is insufficient evidence to conclude that disease management programs can generally reduce the overall cost
of health care service." The CBO and others point to a lack of a consistent analytic framework, rigorous studies, and the absence of a generally accepted accounting methodology that gauges avoided claims expense. Advocates of DM address these criticisms by noting DMOs' accomplishments result from market-based packages of interlocking interventions for heterogeneous populations based on local insurers' demands. This not only limits the generalizability of any findings, but the multiple interventions typical of DM interfere with the measurement of an effect size of a single intervention demanded by the editors of scientific journals. Given its complexity, studying the impact of DM is outside the competency of most DMOs and insurers, and would be daunting even for experienced health services researchers.

The studies of cost savings from DM that do exist offer a mixed assessment. A recent review of State Medicaid DM indicated that these programs contributed to quality improvements but did not produce the anticipated level of savings and in some cases, documented treatment savings were offset by high program costs. A report by the Employee Benefits Research Institute (EBRI) found "no conclusive evidence that disease management programs in general improve health or reduce costs in the long term." A survey of eight evaluations determined to be methodologically rigorous by the American Association of Health Plans found that enrollees in DM had fewer hospital and emergency room admissions and lower overall costs. Weingarten and colleagues, in a review of DM in largely commercial settings in the United States, found there were significant improvements in adherence to clinical guidelines and disease control, but they were unable to show DM lowered healthcare costs.

Despite the lack of any consensus that DM generates insurance savings, there is no shortage of reports about its clinical benefits. In addition to the studies cited by Weingarten et al above, this also has been noted in government sponsored insurance settings. For example, in 2002 the Veterans Administration (VA) reported that its Veterans Integrated Services Network, a technology-based chronic care improvement program, realized a 40% reduction in emergency room visits, a 63% reduction in hospital admissions, a 60% drop in bed days of care, a 64% decrease in nursing home admissions, and an 88% reduction in nursing home bed days. The program was expanded to 10 other sites with similar results, and the VA is now committed to expanding care coordination to 1.2 million veterans by 2008. In testimony before the Senate Committee on Aging, Ruben King-Shaw, then Deputy Administrator and Chief Operating Officer of CMS cited three examples of Medicare managed care plans that have adopted comprehensive DM programs with both costs savings and improved health outcomes.

Several peer-reviewed, quasi-experimental effectiveness studies conducted in commercial insurance settings have demonstrated a favorable impact on costs in DM populations compared to convenience cohorts receiving usual care. While lacking a level of proof supported by prospectively conducted randomized clinical trials, these studies arguably possess some credibility; in fact, these data were probably accepted by the sponsoring organizations long before their appearance in print. Combined with the intuitive value of nurse-based case management as well as the DMOs' performance guarantees linked to avoided costs, it is little wonder that DM has thrived in the commercial insurance sector.

**METHODOLOGY OF MANAGING RISK FOR CHRONIC DISEASE AND A NEW DEFINITION FOR DISEASE MANAGEMENT**

As noted above, health insurers have been unable to discern the impact of quality in moderating the premium necessary to cover the risk of future expenses. Yet, this is what DMOs offer by increasing adherence to evidence-based standards of care and computerized registries in a manner that mimics "an extension of the physicians' office staff." The premise is that these interventions will be followed by decreases in healthcare utilization and insurer savings.

The difference between the fraction of the premium necessary to cover the projected cost
of usual care versus the cost of DM combined with lower utilization becomes profit for the risk-bearing entity. And unlike the fees, guarantees, and risk arrangements between insurers and DMOs, the quality measures used by DMOs to assess the quality of care are not proprietary and widely accepted. This approach to chronic illness leads to an alternative definition of DM: Any population-based system of care that uses a package of coordinated evidence-based interventions to manage that segment of insurance risk associated with chronic disease.

**IMPLICATIONS FOR PHYSICIANS**

Physicians have always struggled with the poor business case for quality. A recent review of the topic based on case studies at well-known institutions confirmed this, concluding usual care is limited by preferential payment for defects, an inability of individual consumers to detect quality, lack of financial incentives for insured consumers to seek best value, uneven clinician access to information, and displacements in the return on investment. In contrast, DMOs seek to overcome these limitations through investments in telephonic and Web-based outreach technologies, computer based registries, decision support, and predictive modeling, intending to help patients with chronic illness be as self-reliant as possible. While not well described, DMO outreach strategies are crafted to be personally meaningful, linking consumerism with quality improvement. Patient engagement, information technology, and ongoing feedback are among the recommendations to address the deficiencies in usual office-based care, and are beyond the ability of most primary care physicians to implement in their office settings.

Outside of these ingredients, what is the difference between “disease management” versus any other provider-sponsored initiative promoting quality or cost reductions? In addition to the reliance on non-physicians for education and case management, DM is independent of location or level of service, operates parallel to the doctor-patient relationship, accepts responsibility for an entire population, and is explicitly configured to reduce claims expense to the advantage of the insurer. Provider organizations offering DM would need to manage insurance risk for populations whether or not its members are actively seeking care. Modifying insurance risk is critical because this is the rationale that underwrites today’s cost of non-physician personnel and supporting information technology infrastructure.

The alternative option of traditional providers “selling” DM or other chronic care management services, independent of risk, under a traditional FFS arrangement is limited by non-remunerative fee schedules for non-physician based education that are vulnerable to discounting, down-coding, and denials. In addition, physicians, with some notable exceptions, practice in independent office settings. A high level of integration involving a large number of physicians would be necessary to attract patients in sufficient numbers to adequately manage insurance risk across a wide population. Finally, physicians would need to embrace a chronic care model that runs counter to the preferred practice of one-on-one visits that emphasize the role of the physician and minimizes collaborative teaming with non-physicians and patients.

However, DM may be a “silver lining” for community-based physicians otherwise beset by consumerism, falling margins, and a widespread expectation to “do more with less.” Unable to afford the investments in staff and information technology, physicians can elect to allow DMOs to take on this task. Physicians can offer usual one-on-one care for acute illness, respond to inevitable (if less frequent) exacerbations of chronic illness or meet any care needs that fall outside the competency of a DM program. If DMO support unburdens practices of supporting chronic care services such as patient education and case management, physicians may be able to accommodate a higher panel size. As “pay for performance” spreads, physicians may have an additional remunerative reason to engage their patients’ DMOs in increasing quality measures among their assigned patients. Finally, accreditation programs for DMOs assess the quality of physician interactions. DMOs’ interest in collaboration may offer opportunities to address the twin challenges of quality and cost.
Despite physician suspicions and lack of hard evidence of cost reduction, CMS has continued to build on its prior experience with DM. This culminated in the inclusion of DM in the MMA.

**IMPACT OF THE MEDICARE MODERNIZATION ACT**

On December 8, 2003, President Bush signed the Medicare Modernization Act (MMA) of 2003. While much of the public’s focus has been on the new prescription drug benefit, the law is likely to have a profound impact on the DM industry. The MMA creates special programs and directs resources to the care, treatment, and management of Medicare beneficiaries with chronic illnesses.

For example, effective January 1, 2006, all Medicare managed care plans (now called Medicare Advantage programs), will be required to have a chronic care improvement program for enrollees with multiple and severe chronic conditions. Similarly, any plan offering the new prescription drug coverage will be required to have a medication therapy management program designed to optimize therapeutic outcomes and reduce adverse event risks for beneficiaries with chronic illness. To help identify Medicare beneficiaries with chronic illness, new benefits for preventive care including a “welcome to Medicare” physical examination, coverage of blood tests for early detection of cardiovascular diseases, and diabetes screening have been included.

One of the most significant new benefits is the “Voluntary Chronic Care Improvement Program” (CCIP). CCIP is a national pilot program designed to evaluate new DM strategies that are scalable, replicable, and adaptable to improve cost-effective quality of care for all chronically ill Medicare beneficiaries in FFS Medicare. CCIP consists of ten program sites with at least 30,000 beneficiaries split between intervention and control groups. In order to be eligible, potential participants must have FFS Medicare and be diagnosed with either CHF or diabetes. A participating organization will be paid a monthly fee per participant, but payment will be similar to the relationship between commercial health insurers and DMOs in that they will be contingent on demonstrating improvements in clinical quality of care, beneficiary and provider satisfaction, and savings to Medicare. This pilot will run three years and will be independently evaluated. If this phase demonstrates that the CCIP has met its objectives, CCIP may be expanded nationwide.

The ten participating organization awardees that have been selected to participate in CCIP are dominated by DMOs with a track record of placing fees at risk. The federal government’s commitment to DM as a risk-modering intervention targeted to beneficiaries with chronic conditions is significant. However, the two-phase approach of the CCIP demonstrates that policy makers, while supportive and optimistic, acknowledge that there still is a need to evaluate the impact of DM and to do it through a controlled study.

**IMPLICATIONS FOR HEALTH INSURERS**

While current revenues of DMOs are in excess of $500 million, they are estimated to grow to over $10 billion over the next ten years even if Medicare ultimately fails to include DM in its benefit. In response, insurers may be tempted by the potentially lower cost of a “carve in” by choosing the “build” option between the “build or buy” for DM. However, DMOs have years of experience in managing insurance risk, quickly launching programs, and leveraging their preexisting infrastructure to minimize the incremental costs of adding additional populations. It remains to be seen whether the DMOs’ remarkable growth will be slowed by a “take back” of some or all of the risk associated with DM.

With time, insurers are likely to gain an even better understanding of the value of DM. If this becomes as widespread and as successful as its advocates predict, it is possible that the business model based on the difference in risk based on usual care and DM care will disappear. As usual care for the chronically ill wanes and its margins vanish, insurers may eventually need to assess—and sell—DM based on a different metric, such as cost per quality adjusted life years (QALYs).47
CONCLUSION

Advocates of DM argue their approach reduces insurance-based healthcare costs. This view appears to have been endorsed by managed care insurers. As DM is incorporated into government-sponsored health insurance programs, physicians can expect to see more of their patients being contacted by DMOs. Physicians interested in offering DM will be challenged by its emphasis on non-physician care, insurance-based performance guarantees, care independent of level or location of service, potential negative economic impact of reduced claims expense or utilization on the local provider system, significant capital requirements, need for multisite practice integration, and lingering commitment to the one-on-one care model. As DM continues to grow, ongoing research, particularly in the MMA, may ultimately prove it is associated with outcome improvement and cost reductions. Physicians also may ultimately embrace DM as an alternative to the effort and expense of completely managing chronic illness themselves, assuming this is ultimately proven to lead to improved clinical outcomes and if physicians can share in any economic savings through initiatives such as pay for performance.

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