Education and debate

Disease management in the American market

Thomas Bodenheimer

Department of Family and Community Medicine, University of California at San Francisco, School of Medicine, 1580 Valencia Street, Suite 201, San Francisco, CA 94110, USA
Thomas Bodenheimer *clinical professor*
tbodie@earthlink.net

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In developed nations, the care of people with chronic disease consumes a large portion of the total expenditure on health. Yet chronic disease is often poorly treated and inadequately prevented. Disease management was introduced in the 1990s as an attempt to improve the quality and reduce the cost of caring for people with chronic disease. The peculiar configuration of disease management programmes in the United States may provide lessons for countries seeking solutions to the problem of caring for patients with chronic disease.

Summary points

The goal of disease management programmes is to improve the quality and reduce the cost of caring for patients with chronic disease

Many disease management programmes in the United States are run by commercial firms that sell their programmes to employers, health maintenance organisations, and hospitals

Some disease management programmes cut costs and improve outcomes, however the data are not conclusive for the disease management movement in general

Commercial disease management programmes may take needed money away from actual caregiving in order to enhance companies' profits

Disease management should be performed within healthcare institutions and be integrated with primary care rather than being outsourced to specialised commercial entities

Methods

This article is based on a Medline search using the term "disease management," review of websites run by companies engaged in running disease management programmes, and 20 interviews with experts and company executives who work in disease management.

Why disease management?

Over the past quarter century, the United States has searched for ways to control the growth of healthcare costs. Rather than rely on governmental regulation, the United States has chosen to use the private marketplace as an instrument of cost cutting.

In the 1980s, the vehicle chosen by large employers and the federal and state governments to control costs was the health maintenance organisation.[1] Many entrepreneurs interested in making profits leapt at the opportunity to rescue the healthcare system while earning a dollar. By 1998, the quick fixes offered by commercial health maintenance organisations, such as reducing hospital admission rates and cutting payments to physicians and hospitals, had run their course. The costs of health care rose again, and Americans reacted strongly against the fact that executives working for health maintenance organisations were earning millions while seeming to deny treatments to sick patients.[2]

During the mid-1990s, a new movement to control costs developed in the American healthcare marketplace: disease management.[3 4] This concept was initiated by pharmaceutical companies because they feared that health maintenance organisations would cut the amount that they paid for drugs just as they had reduced payments to physicians and hospitals. Drug companies use databases of drugs that have been dispensed to identify which patients have chronic diseases and they then offer educational services to those patients. The drug industry believed that it could convince employers and health maintenance organisations to pay for these services and could sell more of their products as part of the bargain.[4 5]

By 1999, about 200 companies were offering disease management programmes for illnesses such as diabetes, asthma, and congestive heart failure. Some disease management companies are associated with pharmaceutical firms: many are not. These disease management companies sell their programmes to health maintenance organisations, employers, and hospitals. The disease management industry has been touting its potential to improve the care of patients with chronic illness while reducing costs. The website of the Disease Management Purchasing Consortium and Advisory Council (www.dismgmt.com), perhaps the most influential organisation in the industry, proclaims: "There is nothing so powerful as an idea whose time has come."

Who are some of the companies offering disease management services? Who purchases services from these companies? Do they improve the care of patients with chronic disease, and do they reduce costs?

The disease management marketplace

Disease management companies come in all shapes and sizes. Cardiac Solutions, for example, began offering disease management services in 1994. The company has contracts with large health maintenance organisations such as Humana, Oxford Health Plans, PacifiCare and United HealthCare. About 9000 patients with conditions such as congestive heart failure, atrial fibrillation, hypertension, and hyperlipidaemia have received services through Cardiac Solutions. Patients who have recently had a myocardial infarction, angioplasty, bypass surgery, or uncontrolled congestive heart failure may enrol in the company's programme, which offers the services of a disease manager who arranges for the patient to receive help with quitting smoking, reducing cholesterol concentrations, managing stress, exercising, and monitoring of weight and diet to reduce the need for emergency room or hospital care.[6]

Control Diabetes Services is a subsidiary of the pharmaceutical manufacturer Eli Lilly, a manufacturer of insulin products. Since 1992, Control Diabetes has entered into contracts with health maintenance organisations and other health insurers, giving the company access to a population of 5 million, including 300 000 people with diabetes. The company has provided services to over 15 000 people with diabetes, offering educational sessions and tracking concentrations of glycated haemoglobin, the frequency of retinal exams, and other measures.

Merck-Medco is a pharmaceutical benefits manager (an organisation that pays pharmacy claims for health insurers) owned by Merck, a large pharmaceutical manufacturer.[7] In 1993, Merck-Medco Managed Care began developing disease management services for more than 20 illnesses including asthma, diabetes, depression, migraines, and peptic ulcer disease.[6] The company has access to 50 million people who are receiving pharmaceutical benefit services from Merck-Medco and is able to identify which people have which chronic disease on the basis of the drugs that they purchase. Merck-Medco sends mailings to patients educating them about their illnesses.

Salick Health Care provides oncology services using proprietary practice guidelines developed by prominent oncologists.[8] The company was acquired by AstraZeneca, the pharmaceutical company that markets bicalutamide for prostate cancer and tamoxifen for breast cancer. Salick delivers its services through a network of comprehensive cancer centres and breast cancer centres.

Not all disease management services are performed by specialised disease management companies. Many such services are offered in-house by health maintenance organisations, medical groups, and hospitals. Lovelace Clinic in New Mexico has been a leader in developing disease management programmes for illnesses such as asthma, coronary heart disease, epilepsy, low back pain, and osteoporosis. Kaiser-Permanente, the University of Pennsylvania, and the Henry Ford Health System have also developed their own disease management programmes.

Costs down, outcomes up

When a disease management firm enters into a contract with a client—often a health maintenance organisation or large employer—to provide services, the firm selling the services must convince the client that it will reduce the client's costs. Ideally, the firm can also bring about an improvement in the outcome of those patients with a chronic disease. Some studies have identified reductions in costs and improvement in outcomes, although such studies are seldom randomised, double blinded, or peer reviewed, and the data supporting the conclusions may be proprietary rather than public.

GlaxoWellcome's self management programme for people with asthma has reported that the number of nights patients were awakened by asthma symptoms decreased from 1.3 to 0.67 per week as a result of patients attending educational sessions led by respiratory therapists, nurses, or pharmacists. Participants reported a 78% decrease in the number of days spent in hospital as a result of their asthma and a reduction of 49% in emergency room visits associated with asthma.[6] GlaxoWellcome manufactures salbutamol (albuterol) and salmeterol asthma inhalers.

Diabetes Treatment Centers of America has boasted of a 10% reduction in concentrations of glycated haemoglobin among the patients it manages and a 26% reduction in healthcare costs as a result of reducing the number of days patients spent in hospital and visits to the emergency room.[9]

Humana, a large health maintenance organisation, has a contract with Ralin Medical to launch a programme for patients with congestive heart failure. Humana claims to be saving $850 (£531) for each member each month for patients enrolled in the programme. Ralin is paid only if it saves money for Humana, and the two organisations share the savings. The programme claims that hospital admissions decreased by 60% and total medical costs went down by 55% as a result of nurses making home visits and maintaining frequent contact by telephone with patients with heart failure.[6]

A programme to manage patients with depression, which was supplied by Integra, is claimed to have reduced costs associated with the illness by 56% in two years while achieving clinical improvement in 81% of participants as measured by questionnaires completed by both patients and providers.[6]

Academic medical journals have published well designed studies showing that costs have been reduced and outcomes improved by disease management

efforts particularly in the area of cardiology. In one trial of nurse directed management of patients with congestive heart failure, readmission rates and medical costs were lower in the intervention group than in the control group.[10] In another study comparing patients with congestive heart failure before and after intervention, a home based system run by nurses reduced rates of hospital admission and emergency room visits and improved patients' functional status and exercise capacity.[11] In a similar programme aimed at reducing the risk of coronary heart disease, the intervention group had higher rates of smoking cessation, lower concentrations of low density lipoprotein cholesterol, and greater functional capacity than the control group.[12]

It is too soon to draw firm conclusions about whether disease management programmes save money. The research organisation Interstudy identified some surprising results. Only 43% of health maintenance organisations with diabetes management programmes reported that these programmes had saved money, and only 27% saved money through implementing their asthma programmes.[6] The figure for asthma treatment is surprising since proper management of asthma would be expected rapidly to reduce the number of days spent in hospital and visits to the emergency room. The data on diabetes are expected since most savings from diabetes care appear in later years as long term complications are prevented. Well designed, long term, non-proprietary studies are needed to confirm the potential cost savings and enhancement of outcomes to be expected from disease management programmes.

Hazards of commercial disease management

Disease management programmes have the potential to improve care and reduce the costs of chronic illness. However, certain characteristics of the disease management marketplace may cause concern. Disease management in the United States, whether outsourced to a corporate vendor or performed within a commercial health maintenance organisation, largely takes place within the for profit healthcare sector. Problems that are likely to arise in the disease management movement mirror difficulties that have surfaced in health maintenance organisations. Perhaps disease management advocates can learn from the experiences of health maintenance organisations over the past two decades.

Questionable cost savings

Data initially showed that health maintenance organisations reduced the costs of health care, especially hospital care, when compared with traditional fee for service healthcare institutions.[13] Yet a recent study has suggested that health maintenance organisations are able to reduce hospital costs by less than 1% per year.[14] Enthusiasm for health maintenance organisations by large employers who saw them as the answer to reducing healthcare costs is waning as employers' expenses resume their upward trend.[15 16] Is it possible that the promising cost savings of disease management will similarly evaporate in a few years?

A portion of the cost savings from health maintenance organisations resulted from the organisations' success in attracting healthier, lower cost patients, in particular among the elderly population.[17] Commercial disease management programmes are likely to skim off people with chronic illnesses who are most motivated to attend classes, follow treatment guidelines, and thereby incur lower healthcare costs for the programme. Patients having difficulty complying with treatment regimens and unable to attend classes for socioeconomic reasons may be left behind, increasing the cost of providing care for those left behind and making disease management programmes appear cost effective through favourable selection.

Profit should not be the measure of success

A number of health maintenance organisations have pulled out of less profitable markets.[18] Similarly, disease management firms could forsake certain diseases or certain populations because of business considerations. In contrast, community oriented programmes are based in part on meeting medical needs rather than purely on achieving commercial success.

The disorganisation of care

Health maintenance organisations that provide care through contracted networks of providers fragment the delivery of health care. Physicians are frequently unable to send patients to specialists, ancillary services, or hospitals near their offices because those facilities do not have contracts with the patient's health maintenance organisation. Similarly, disease management firms, by removing the care of patients from the coordinating function of their primary care physicians and channelling them to one programme for diabetes, another for hyperlipidaemia, and yet another for congestive heart failure, can create major irrationalities in the organisation of care.[4]

Skimming off profits

With their high levels of administrative expenditures and executive compensation, health maintenance organisations have skimmed billions of dollars from the healthcare economy.[19 20] Disease management companies could do likewise. Take the example of a disease management firm that enters into a contract with a medical group to organise classes for patients with diabetes. The firm subcontracts with local diabetes centres to provide classes. Funds flow from the medical group to the disease management firm to the diabetes centre situated in the same building as the medical group. Would it not be more efficient for the medical group to send patients with diabetes directly to the diabetes centre without going through the disease management middleman?

As more funds are dedicated to disease management, less will be available to pay primary care physicians. For the tens of millions of Americans enrolled in health maintenance organisations, a fixed amount per patient is divided among hospitals, physicians, and ancillary and other services; dollars carved out for disease management firms are not available to primary care physicians. These physicians will be forced to see more patients to earn the incomes they are used to, allowing them less time to care adequately for patients with chronic diseases. Disease

management firms will accumulate the knowledge of how best to manage patients with chronic diseases while primary care physicians may increasingly lose these skills.

Conclusion

Disease management programmes show promise in improving the care of patients with chronic illnesses. But commercial disease management may have damaging, unintended consequences for healthcare systems. Healthcare institutions should initiate in-house disease management programmes that assist primary care physicians in doing a better job rather than outsourcing growing portions of health care to specialised commercial outfits.

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Commercial partnerships in chronic disease management: proceeding with caution

Trisha Greenhalgh, Andrew Herxheimer, Anthony J Isaacs, Mike Beaman, Jenny Morris, Stephen Farrow

Department of Primary Care and Population Sciences, University College Medical School, London N19 3UA
Trisha Greenhalgh *senior lecturer in primary health care*

Clinical Effectiveness Review Group, Barnet Health Authority, London NW9
Andrew Herxheimer *clinical effectiveness adviser*
Anthony J Isaacs *consultant in public health*
Mike Beaman *pharmaceutical adviser*
Jenny Morris *public health specialist*
Stephen Farrow *director of public health*

Correspondence to: T Greenhalgh p.greenhalgh@ucl.ac.uk

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The spirit of "new Labour" strongly supports efforts to align commercial and NHS interests. The use of private funding for capital projects, such as building hospitals, is now well established, although this practice is not without controversy.[1] We discuss a different form of private finance initiative—the development of packages for disease management in collaboration with commercial companies. We describe our preliminary experiences from a health authority perspective.

The Clinical Effectiveness Review Group was established in 1995 at Barnet Health Authority to address the implementation of evidence based practice at health authority level. The Director of Public Health (SF) noted that he occasionally received offers from independent organisations of "free" packages of services, directed ultimately at general practices, hospital departments, or community pharmacies. These organisations were pharmaceutical companies, producers of medical equipment, or their agents, which, despite a clear conflict of interests were perceived as offering a potentially important contribution to the health of the population (box 1). Somewhat confusingly, these offers were often presented as "managed care" packages, a term that generally implies a different approach aimed at centralised control and cost containment.[2]

We defined commercial packages for disease management as materials or support supplied by a third party in addition to, and capable of being integrated with, services routinely provided in public sector health care. This definition encompasses the provision of educational leaflets, help with training staff, audit, decision support systems, investigations (such as echocardiography), or a specialist clinical service along with a pharmaceutical product.

Summary points

Commercial companies, especially the manufacturers of drugs and medicines, increasingly seek to work in collaboration with NHS service providers to manage particular diseases or problems

With such relations there are risks, but also potential benefits, and it may be more realistic to require all parties to be explicit about their potential conflicts of interest than to impose a blanket ban on negotiations

One London health authority developed and used a set of standards for collaborating with the commercial sector in "managed care" initiatives

The draft proposals could be used with a view to developing definitive guidance for health authorities, primary care groups, and trusts when considering such collaborative relations