International Journal of Integrated Care – Vol. 2, 1 March 2002 – ISSN 1568-4156 – http://www.ijic.org/

Book review

Disease management: a systems approach to improving patient outcomes

Edited by Warren E. Todd, David Nash,
San Francisco: Jossey-Bass, 1997, pp. 357,
ISBN 1-55648-168-3

This book contains 12 chapters written by 30 authors, 52 figures, 35 tables, 384 references and 357 pages. It is a real *How to-Book* written by authors who are eager to explain *what* Disease Management (DM) is and to instruct the readers *how to* develop it in their own company or country. Most definitions and instructions are accompanied by organisational schemes, flow charts for developmental processes, case studies of best practices and references. It is too much to discuss in a book review all knowledge of each chapter. That's why I concentrate on those topics, which are also interesting for non-Americans.

Chapter 1 introduces the concept of disease management, two words used for the first time by the Boston Consultancy Group in 1993. The authors situate the concept between *Component Management* and *Health Management.* A component is an organisational unit, for instance a hospital or a home care organisation. *Component management* is the traditional way of managing hospitals and other health care organisations. *Health management* has as objective the health of a target group: the group of insured persons of an insurance company, the workers of a company or the local population of a municipality or province. Not only care is managed but also all social and preventive services, such as adaptation of the work place of a disabled person or a special school for children with a chronic condition. *Health management* is beyond disease management and is discussed in the last chapter in this book.

Between Component Management and Health Management there is Disease Management, with six defining aspects:

1. *Understanding the course of the disease to which the disease management programme or system is focused*. The difference between a programme and a system is that the first one is more loosely organised than the last one. The title of this book contains the words *Systems Approach,* which emphasises the authors' preferences for systems. Most disease management systems are focused on diseases as Asthma/COPD, diabetes, depression, cardiovascular disease and cancer. All of these conditions have an understood course of the disease.
2. *Targeting patients likely to benefit from interventions*. Using the knowledge of the course of the disease and the costs of each phase of it, a disease management system focuses its activities on patients in that phase in which costs are high and alternative interventions available. As an example is Figure 1.1 in the book showing costs of care per month of a depressed person. During the diagnosis phase as distinguished costs per month are high.
3. *Focusing on Prevention and Resolution.* Although generally formulated the authors reduce the concept of prevention to advice on diets, exercise, non-smoking, alcohol consumption and other lifestyle advices to individual patients. *Resolution* is in this context the use of only Evidence Based Medical Treatment.
4. *Increasing Patient Compliance through Education.* An important part of disease management is patient education to promote the compliance with (pharmaco) therapy and other medical treatment. There is an overlap with point 3, which emphasises the compliance with advised preventive coping behaviour.
5. *Providing Full Care Continuity*. The authors fill in this aspect with ''aggressive case management (...) to plan and monitor treatment across all settings. The goal would be to avoid problems and to keep the patient out of the expensive (...) settings''.
6. *Establishing Integrated Data Management Systems*. The importance of sophisticated data systems with disease management programmes cannot be overstated. Computerised patient records and auotomated surveys are necessary. The greatest obstacle to the success of disease management is the current lack of integrated data management.

Chapter 2 discusses the development towards disease management during the last twenty years. Important for Europeans is the observation that fee-for-service systems are old-fashioned: they form the first step towards disease management. The second step is utilisation review within the fee for service systems. Thirdly is the occurrence of Managed Care Organisations. During the fourth phase the disease

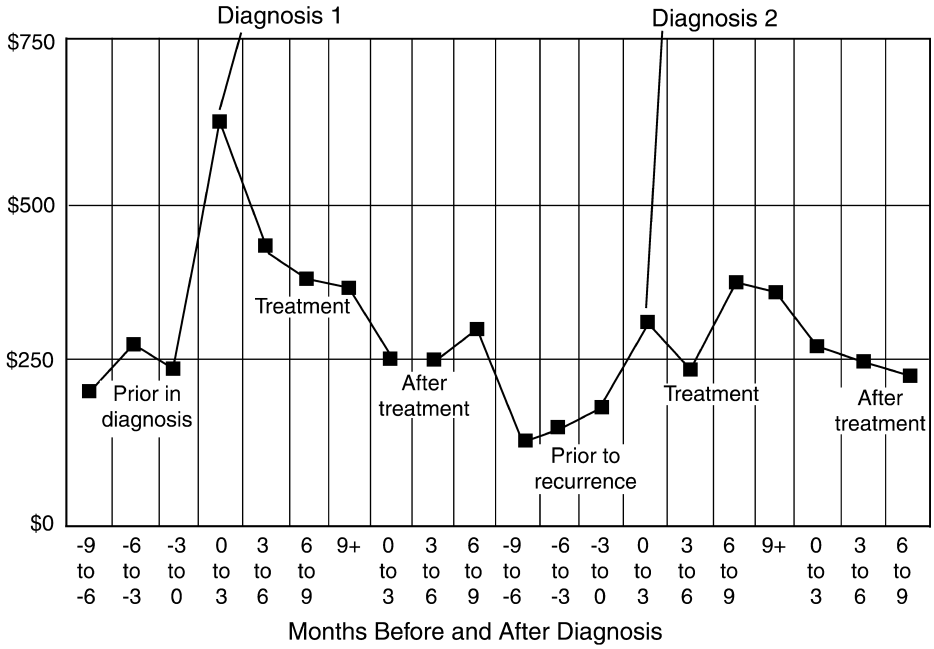


Figure 1.1. A disease cost model for depression.

management systems are dominant. During the final phase these systems have made place for Population Based Health Management Systems, which were already mentioned in Chapter 1. To develop a disease management System Chapter 2 shows flow charts with implementation strategies. One of them is Figure 2.2

Chapter 3 on Health Outcomes of Disease Management is less interesting for health services researchers who are familiar with Cost Effectiveness Analysis and Medical Technology Assessment. However, the author emphasises that knowledge is not enough to implement Evidence Based Medicine in a disease management setting.

Chapter 4 discusses financial and actuarial issues of disease management. The authors can be complimented that they do not teach the basics of financial accounting and budgeting. They go immediately to issues specially related to disease management. They introduce the *yearly treatment costs per patient group by percentiles.* This is known as the 20–80 rule: 20% of all patients consume 80% of the costs. Disease management should focus on this 20%. Another new economic indicator is the costs by type of encounter and by type of episode. The authors distinguish as encounters for example regular Out Patient Department visits, emergency room visits and admissions. Episodes can be periods during which a disease is active, which can be the case with Asthma; periods corresponding to specific drug regimens or a stage of a progressive disease, such as AIDS.

Chapter 5 discusses the selection of a disease management system. The authors introduce three selection criteria:

1. the impact of the disease on costs and quality,
2. the availability of interventions and
3. the potential value of disease management for cost control and quality improvement.

Somewhat disillusioning for the European reader are the economic considerations to select a patient group for a disease management programme. Not the continuity of care or the multidisciplinary approach of the providers are the decisive factors but economic reasons. For instance the ‘‘patients with the highest aggregate payments per care episodes’’ are very interesting for disease management.

Chapter 6 focuses on identification, selection, evaluation, modification, dissemination and implementation of Clinical Practice Guidelines in disease management systems. The authors underline that evaluation and periodic review of the guidelines in the own disease management organisation is important. Everything in this chapter is true, but the book reviewer had the feeling of a sentimental journey: coming back to already known places.

Chapter 7 discusses the role of Pharmaceutical companies in disease management, which are the founding fathers of the idea of disease management. This is firstly a historical chapter showing how disease management was primarily distrusted because of its

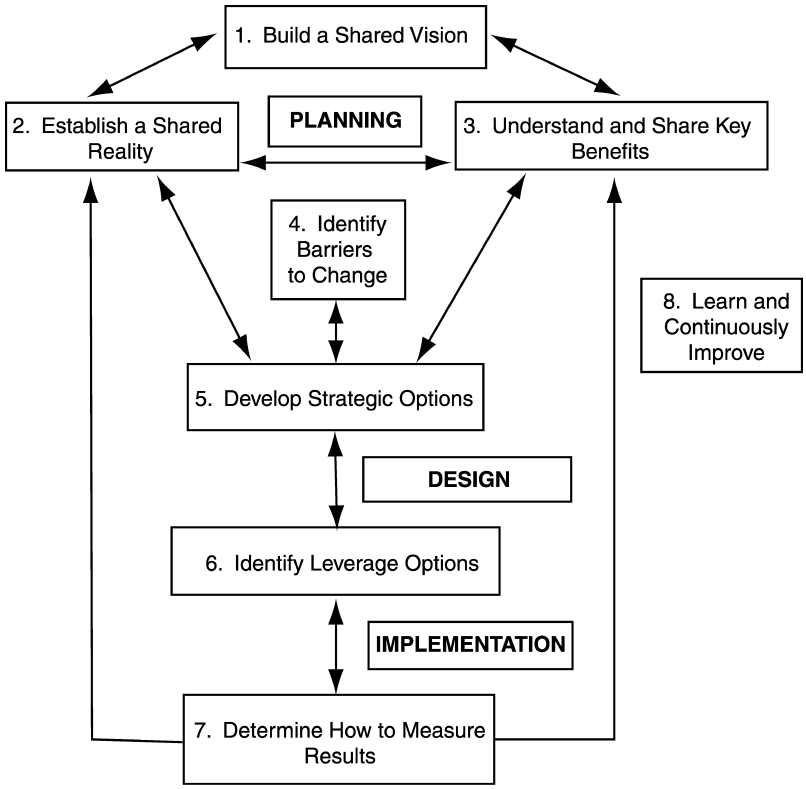


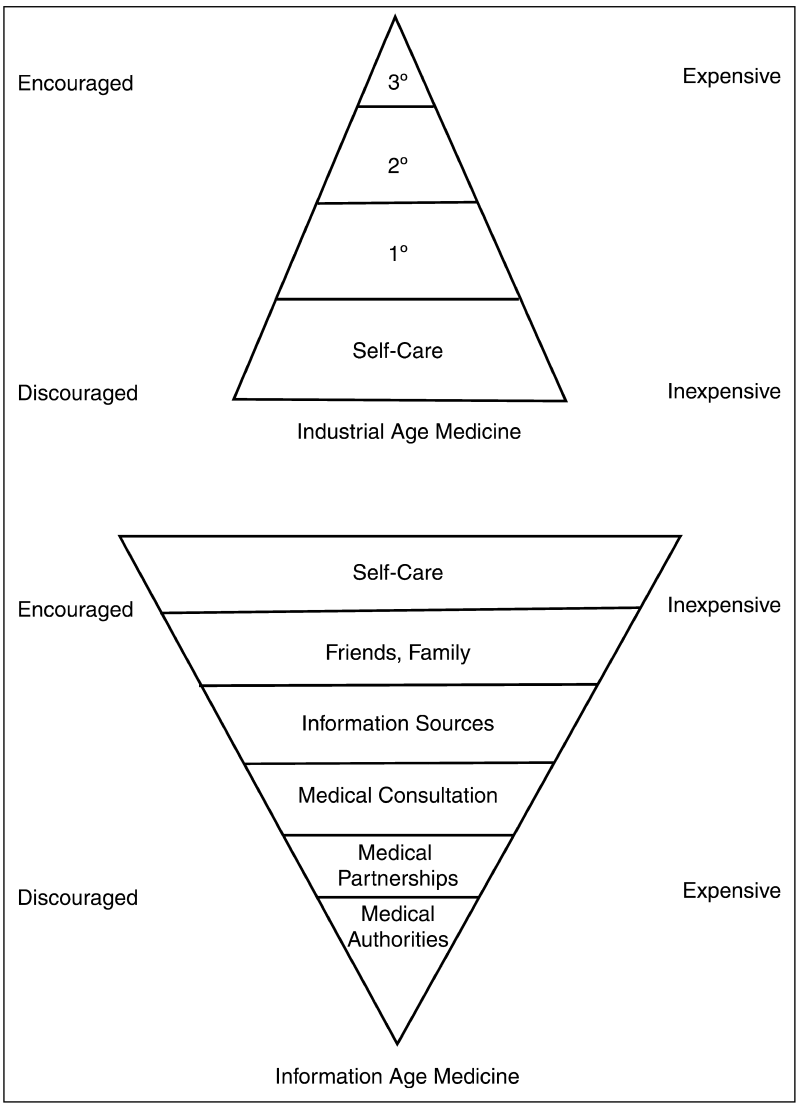
Figure 2.2. Systems-thinking model: the disease management process.

pharmaceutical background and how it got later its own value because of its six main aspects, mentioned in Chapter 1. The authors finish their contribution by presenting a questionnaire to assess Pharmaceutical Industry Disease Management Programmes. The book reviewer thinks that the questionnaire can be used for more disease management systems than only those, which are owned by Drugs companies.

Chapter 8 describes the role of disease management within Managed Care Organisations. The authors give a historical overview that is comparable, or, negatively formulated, an overlap, with that in Chapter 2. They mention five performance indicators for Asthma disease management system: frequency of exacerbation, changes in severity or functional health status, frequency of physician and emergency room visits, medication usage and work/school days missed. As best disease management practices they present a Diabetes- and an Asthma programme. Combining this with best practices mentioned in other chapters I got the impression that disease management is mostly involved with these diseases.

Chapter 9 shows the role of case management without and with disease management. Prior to disease management, case managers have an individual patient focus, intervene within only one and the same clinical episode, and try to prevent hospitalisation, have a short-term relationship with a patient and work only within the domain by whom they are paid. According to the authors, this all changes after the introduction of disease management. Then, case managers have a population focus, do also preventive and educational interventions, and try to prevent illness, have a long-term relationship and work also outside the domain of the payers. Although it is interesting to read about the differences, it is unclear what the authors describe: the nowadays reality of disease management or wishfully thinking about it?

Chapter 10 has as title *Home Care and Disease Management.* However, it is more a description of the American Home Care Industry. The chapter is interesting because of its emphasis on clinical pathways, which are not discussed until this chapter. The authors argue to analyse the practice patterns of care delivery and to split these up in disease components. Then the home care activities can be defined. What I missed in this chapter is a discussion of nurse general practitioners versus nurse specialists. Who is the most important nurse in a disease management programme for diabetes patients: a general educated case manager or a nursing diabetes specialist?



Source: Tom Ferguson, MD, Austin, TX

Figure 12.5. Shifting health information paradigms.

Chapter 11 discusses the necessity to form alliances between health care providers to create a disease management system. The authors argue that an alliance is the most difficult way of cooperating. Easier is an internal corporation: all disciplines are available within the same health care organisation. By top down redesigning the care process a disease management programme is created. External corporation is also easier: then one company buys in the services of another company. It is clear what the dominant actor is and regulations are simply made. The extended corporation, in which two or more corporations cooperate without merging with each other and without buying and selling to each other, is most complicated. Following the authors, three basic criteria for ideal alliances are:

1. they must be long term relationships,
2. they must be built on close operational ties and
3. they must have true vested interest in each ally's future.

This chapter gives a lot of amusing case studies about successful and disappointing alliances.

Chapter 12 is the last chapter and discusses Health Management as defined in the first chapter. It shows us the Promised Land of the disease management believer. There is health optimised, health risks minimised, specific diseases are prevented, early diagnoses are facilitated, clinical effectiveness is maximised and complications of diseases are avoided. There, unnecessary care is eliminated and care quality

continuously improved. Although all these objectives are inspiring, intellectually two other topics are more interesting. The first one is the argument for a shift in the health information paradigm (see Figure 12.5).

The information is not dominantly collected in the third tier, for instance within the big hospitals but in the population itself: the self-caring patients, their friend and families. The second point is the plea for integration of disease management programmes with occupational health agencies. Then a health management programme for the working population is possible. Because many American Managed Care Organisations with disease management are linked to big employers, this option is not that far away as the Promised Land in the beginning of the chapter.

The strength of this book is the enthusiasm of the authors, the clear definitions, flow charts and step-by-step approaches. Sometimes, this is also its weakness when the authors do not distinguish enough between facts and dreams or when they reduce the complex disease management world to one single scheme. However, readers of the International Journal of integrated Care should buy the book when they need definitions, indicators and historical overviews. Hopefully, an updated version of this book of 1997 is published in the coming years.

P.S.

Having finished this book review I received the report DISEASE MANAGEMENT ONLINE, CRITICAL INGREDIENTS FOR SUCCESS, which can be considered as an update of the above reviewed book. All emphasis is given to the use of Internet for education and empowerment of the patient. Some doctors hesitate to meet very well informed patients who consulted disease management websites between two consultations. Anyhow, some (not scientific published) results show that at the end of the day, well informed patients have more compliance with the therapy than not informed persons.

Nevertheless, many problems have to be solved. How to identify that the surfer/loginner is indeed the patient self? How to organize a virtual helpdesk if the website does not contain a prepared answer? Who is responsible for the electronically given advices? The authors give some beginning of the solutions for these question. But, the answers are not completely satisfying.

The report can be ordered at

www.themsic.com or at

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