Visiting congresses in 2007 (London and Bonn) and 2008 (Gothenburg), I heard the words disease management being used for programs focusing on one single disease: for instance, diabetes or heart failure or depression or COPD. In Germany and Austria, the term disease management is monopolized for single disease programs with an emphasis on prevention and self-management by patients and family. These programs are financed by social insurance companies with special arrangements for doctors and patients. Although I welcome these initiatives, I don’t think these single-disease programs are the only answer to the needs of patients with chronic diseases, because many chronic patients suffer from more than one disease. They suffer from diabetes plus depression or from heart failure plus COPD and sometimes they have more than two chronic conditions.

At other moments during these congresses the phrase disease management referred to prevention: how to identify persons at risk of a chronic disease? How to promote healthy lifestyles such as exercise and self-management, when there are symptoms of a chronic disease? How to stop smoking? How to stop unhealthy eating habits? How to stop too high alcohol consumption?

I also noticed an association of the words disease management with cost reduction. My Japanese colleague and editor of this journal, Etsuji Okamoto, defines disease management as: A buzz word in Japan. At least here, government and insurers promote it with an aim of achieving savings on health care cost. I would define disease management as management of chronic conditions initiated by third parties particularly by insurers with an eventual purpose of reduction of health care cost in the long run, provided through an integrated approach of medical care providers and health guidance by the third parties, facilitated in many cases by effective employment of IT technologies. In the USA, disease management is often associated with commercial firms working for one single chronic disease with the ambition to show lower costs Per Month Per Member.

Disease management also improves compliance to pharmaceutical drugs. That is why it promotes the efficacy of these drugs, because then they are better sold. The term Disease Management was invented in the 1990s by three pharmaceutical companies.

Because of all these different elements and associations, I propose to our readers, authors and participants of our congresses a redefinition of the concept of disease management. To come to a new definition, I went into my personal archive where I collected definitions of disease management used in papers published between 2006 and mid-2008. I do not pretend to have done a systematic literature review; this editorial is a contribution to and not the final word in the debate about what disease management is. I found seven definitions of disease management (see Table 1).

Four of the currently used definitions were formulated for the first time in the years 1996 and 1997. That is the period that disease management came up in the USA. The three other ones are from a more recent year. I found eight elements in the definitions characterizing disease management: (1) focusing on a target group (2) of persons with chronic diseases (3) with the goal to improve clinical outcome and quality and (4) cost-effectiveness of care (5) by means of a systematic approach (6) with preventive and curative interventions (7) in which self management by patients is important (8) provided by a multidisciplinary professional team.

Epstein’s definition contains six of the eight elements and misses the self-care by patients and the multidisciplinary element. The other authors provide us with definitions mentioning five or less elements. Surprisingly, only three authors (Epstein, Faxon and DMAA) mention a target group, although at IJIC congresses in 2007 and 2008 the most important element of disease management was the focus on a target group of patients suffering from one single disease. The three authors use broad descriptions of target groups: population based (Epstein), selected patients suffering from chronic conditions (Faxon) and populations with conditions in which patient self-care efforts are significant (DMAA). None of the seven definitions focus on a single disease target group. Disease management is, according to scientific authors, not by one disease alone.

Let me propose a new definition to facilitate the communication between researchers, policy makers and disease management program leaders. I want to include the eight elements in the above mentioned definitions, along with the ninth element: the use of modern Health Information Technology (HIT) to facilitate communica-

---

1 For the conference archive visit: www.integratedcare.eu
tion between professionals in a disease management program, to integrate all health data in one electronic patient record, to support telemedicine and telemonitoring and to give feedback and reminders to professionals and patients. In my proposal, I use the nine elements and formulations of all seven mentioned authors. I don’t want to introduce a completely new, out of the box, definition.

My proposal starts with the short definition of Weingarten: *Disease management is an intervention designed to manage or prevent a chronic condition using a systematic approach to care and potentially employing multiple treatment modalities*. However, Weingarten is not explicit about focusing on more than one chronic condition and he does not mention the elements: goal of disease management, multidisciplinary approach, self management by patients and health information technology. Adding these elements, I propose the following definition:

*Disease management consists of a group of coherent interventions designed to prevent or manage one or more chronic conditions using a systematic, multidisciplinary approach and potentially employing multiple treatment modalities. The goal of disease management is to identify persons at risk for one or more chronic conditions, to promote self management by patients and to address the illnesses or conditions with maximum clinical outcome, effectiveness and efficiency regardless of treatment setting(s) or typical reimbursement patterns.*

I invite readers and authors to give comment to this proposal and to vote for or against my definition (visit our home page at www.ijic.org). During our international annual congress on Integrated Care in Vienna on 5 and 6 November 2009 (visit www.integratedcare.eu) surely, we can communicate easier about (the definition of) disease management.

Guus Schrijvers,  
*Editor-in-Chief International Journal of Integrated Care,  
Professor of Public Health at the Julius Center of the University Medical Center Utrecht*

### References

1. Epstein RS, Sherwood LM. From outcomes research to disease management: a guide for the perplexed. Annals of Internal Medicine 1996;124(9):832–7.
2. Dellby U. Drastically improving health care with focus on managing the patient with a disease: the macro and micro perspective. International Journal of Health Care Quality Assurance 1996;9(2):4–8.
3. Ellrodt G, Cook DJ, Lee J, Cho M, Hunt D, Weingarten S. Evidence-based disease management. Journal of the American Medical Association 1997;278(20):1687–92.

4. Zitter M. A new paradigm in health care delivery: disease management. In: Todd WE, Nash D, editors. Disease management: a systems approach to improving patient outcomes. Chicago: American Hospital Association; 1997. p.1–25.

5. Weingarten SR, Henning JM, Badamgarav E, Knight K, Hasselblad V, Gano A Jr, et al. Interventions used in disease management programmes for patients with chronic illness – which ones work? Meta-analysis of published reports. British Medical Journal 2002;325(7370):925.

6. Faxon DP, Schwamm LH, Pasternak RC, Peterson ED, McNeil BJ, Bufalino V, et al. Improving quality of care through disease management: principles and recommendations from the American Heart Association’s Expert Panel on Disease Management. Circulation 2004;109(21):2651–4.

7. DMAA: The Care Continuum Alliance. DMAA Definition of Disease Management. Available from: http://www.dmaa.org/dm_definition.asp.