

Chronic Disease Management: Challenges for Clinicians and the Way Forward

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The healthcare, financial and social burden of chronic diseases, such as diabetes mellitus, coronary heart disease, asthma, chronic obstructive airway disease, hypertension, chronic depression, osteoporosis, end stage renal failure and stroke, are steadily on the rise. In the US alone, some 125 million people now suffer from at least one chronic disease. While no nationwide studies on chronic disease have been done in Singapore, National Health Surveys have shown a definite and significant increase in chronic diseases over the past few decades. Our mortality indicators support this with a consistent picture of an epidemiological transition from acute infectious diseases towards chronic debilitating illnesses which was obvious from the mid-sixties.

Meeting the complex needs of patients with chronic diseases is the single greatest challenge facing our healthcare system today. With the increasing numbers of patients afflicted with chronic diseases, it is imperative that clinicians, healthcare administrators and health policy makers plan and ensure that the healthcare delivery system is configured to provide care for these patients across the continuum of their healthcare needs.

Chronic disease management has been referred to be the best and most comprehensive approach for providing holistic and comprehensive care for patients with chronic illnesses. Tackling chronic diseases at the system level has been the focus of many recent publications.¹⁻⁴ In the US, the recent Institute of Medicine Report – *Crossing the Quality Chasm* – focused on the need to reorganise care delivery to meet the healthcare needs of populations of patients who suffer from chronic illnesses.⁵ In October 2001, the *British Medical Journal* and the *Western Journal of Medicine* both published special issues focusing on the problem of chronic diseases and highlighted how various nations are dealing with this growing epidemic. It is therefore timely that a special issue of the *Annals* focuses on the needs of patients with chronic disease, on the advances in clinical and non-pharmacological management, and the challenges faced in ensuring that patients receive optimal care meeting the needs at the various stages of their disease.

Disease management is a multidisciplinary, continuum-based approach to healthcare delivery that proactively identifies populations with, or at risk for established medical conditions that:

- supports the physician-patient relationship and plan of care;
- emphasises prevention of exacerbations and complications, utilising cost-effective evidence-based practice guidelines and patient empowerment strategies such as self-management; and
- continuously evaluates clinical, humanistic and economic outcomes with the goal of improving overall health.

Wagner et al³ derived a model for evidence-based chronic disease management which emphasised 4 main factors:

- well-developed care processes and incentives for making changes in the healthcare delivery system;
- presence of behaviourally sophisticated self-management support that empowers patients with self-efficacy, which in turn enables them to be their own disease manager;
- focus on team-based care delivery;
- use of evidence-based clinical practice guidelines and clinical pathways, including patient education and reminders; and
- enhanced information systems to facilitate the development of disease registries, tracking systems and reminders, and to enable the team to evaluate the care provided.

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So what role do specialists play in chronic disease management programmes? It is evident that such programmes, if they are to be effective and successful, would require the professional leadership of specialists, working in collaboration with other important members of the healthcare team, including primary care physicians, case managers, nurse practitioners and relevant allied health professionals. The key role of the specialist is in providing the professional direction and content for these chronic disease programmes. However, this is not as straightforward as it seems. Specialists are used to working within hospitals or specialist centres. Unfortunately, much of the care delivery process for patients with chronic diseases takes place in the community, which is why primary healthcare and shared care between the specialist, primary care physician and the rest of the members of the healthcare team is critical in designing chronic disease management programmes. Specialists must see their role as not merely a hospitalist, but a professional clinician who collaborates with other team members to assess, plan, customize where appropriate, and deliver the medical care required for the patient afflicted with the chronic disease. The specialist should also evaluate the quality of care given. This is facilitated by the presence of a clinical database or a disease registry. It is again the role of the specialist to lead the team in defining the critical pathway for the clinical management of the patient population, identifying key clinical and non-clinical outcomes are necessary to be tracked and monitored and evaluating the programmes in place in terms of process and outcome.

So where does this take us in Singapore? It is gratifying that the Ministry of Health is taking a strong and committed approach towards implementing good and effective chronic disease management programmes. The establishment of the two healthcare clusters also provides an opportunity for hospital specialists to integrate their care delivery with the primary care physicians. While several chronic diseases of public health importance have been identified in developing these programmes (e.g. diabetes mellitus, stroke and ischaemic heart disease), it remains to be seen if these programmes could be organised effectively and efficiently at the national level to cause a significant impact on the quality of life and outcomes of their respective patient populations. What is evident is that the pillar for chronic disease management programmes will be, as it has been in other countries, in the primary care setting. This is where the care delivery has been found to be the most cost-effective and affordable for patients. The main challenge is how the much-needed resources of the healthcare teams (comprising nursing and allied health manpower and community-based care) could be mobilised and harnessed to effectively meet the needs of the patients and their healthcare needs and of their families.

While the results of some randomised trials have shown that effective disease management programmes can result in substantially better clinical and financial outcomes (to date, mainly for patients with diabetes mellitus, congestive heart failure or asthma), there is a pressing need for further local research (both clinical and health service related) on the cost-effectiveness of chronic disease management programmes. Some of the papers in this special issue of the *Annals* provide insights into the complex issues surrounding the delivery of care for patients with chronic illnesses. The true economic and social burden of chronic diseases such as diabetes mellitus, congestive heart failure and stroke however have still not been well defined. Much remains to be understood in terms of the most cost-effective and efficient model of delivery of care, for patients with multiple medical conditions. This is an arena where there would be a great potential for the sciences of medicine, economics, epidemiology and molecular biology to be applied synergistically to benefit the affected patients and in so doing to improve the health of the nation.

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