Many health systems in Canada are beginning to acknowledge the need to improve care for individuals with chronic illness. Our present system is primarily designed for acute care; urgent symptoms often trump the necessity or desire to bring the patient’s chronic disease under optimal management. As the Institute of Medicine’s (IOM) milestone report “Crossing the Quality Chasm” suggested, trying harder or doing more of the same will not work and only true system change might attempt to overcome the seemingly insurmountable deficiencies in the system. As a result of this call to action, the Chronic Care Model (CCM) was developed as a road map to improve the quality of chronic illness care. The CCM does not suggest a quick fix, but a multi-dimensional, systematic approach to a complex problem.

“The CCM was developed to address the need for an overall vision and desire for more coherent guidance for system change to address chronic diseases.”

The CCM was developed to address the need for an overall vision and desire for more coherent guidance for system change to address chronic diseases. Ed Wagner, along with a team from Group Health Cooperative, the MacColl Institute for Healthcare Innovation, and international experts, investigated effective interventions for the treatment of diabetes mellitus in the literature and ideal chronic illness care programs. The interventions were highly diverse, but tended to fit into four categories: provider behaviours, patient interventions, practice design interventions, and enhancements to clinical information systems. As the interventions reflected a larger variety of these categories, the more effective the package of interventions tended to be. With further analysis into other chronic disease areas, similar comprehensive interventions involving the whole practice team, with attention to providers, patients, and system design, were consistently most effective.

The CCM begins at the bottom with “improved outcomes”: what providers and patients with chronic illness would consider the most important aspect of care (see Figure). In order to achieve this result, change is necessary to the way in which patients interact with their practice team. This requires productive interactions between a prepared proactive practice team and an informed, activated patient. What characterizes a productive interaction? It is...
clinical and behavioural interventions that reflect evidence-based, guideline-driven chronic care delivered in a fairly systematic way. These interactions also include assessments of clinical status, self-management skills, confidence, as well as collaborative goal setting as a matter of design. Productive interactions need not necessarily occur in person or individually but could be by phone, e-mail or telehealth.

The proactive practice team needs to be supported by systems that provide the necessary patient information, decision support and resources to deliver high-quality, evidence-based clinical care. A patient must have sufficient information and support to have the motivation, skills and confidence to make effective decisions about his/her health issues and how to manage them. To have these elements come together at the time of interaction, significant improvements need to occur in the healthcare system. The key areas for change are reflected in the six pillars of the CCM. These include:

**Self-Management Support (SMS)** – These interventions empower patients and prepare them to manage their health and healthcare more effectively. Self-management support emphasizes the patient’s central role in their care and utilizes proven support strategies such as information sharing, collaborative goal setting and action planning. Resources internal and external to the health system also need to be activated to support ongoing self-management. Providers might need to relinquish some degree of autonomy and decision-making, but using a shared approach can improve disease control, patient engagement and health outcomes.

**Delivery System Design (DSD)** – These elements assure the delivery of effective, efficient clinical care and self-management support. Transformational change is required to move from an essentially reactive system to a more proactive, wellness-focused model. The majority of DSD interventions engage increased involvement of non-physician members of the team, defining roles, and assigning critical tasks to others who might have more time or perhaps better training. In addition, more planned, productive interactions support evidence-based care and ensure regular follow-up. The more complex patients may need case or care management to optimize clinical care and self-management. As well, providers need to provide care that is consistent with the patient’s cultural and linguistic needs.

**Decision Support (DS)** – These interventions promote clinical care consistent with scientific evidence and patient preferences. As treatment decisions need to be based on proven guidelines, these principles need to be integrated into the practice flow to support care at the point of service. The sole distribution of guidelines has minimum positive impact on care without ongoing education delivered by proven methods. Not only do providers need to be aware of guidelines, but also share this information with patients to encourage their participation. The integration of specialists’ expertise with primary care providers supports the decisions made in the care of the more complex patient.

**Clinical Information Systems (CIS)** – These elements are established to organize patient and population data to facilitate productive interactions and efficient, effective care. Clinical information systems can enhance care planning for the individual patient with access to more complete health information and provide timely reminders and feedback for providers. These systems also have the opportunity to identify relevant subpopulations for proactive care. With the ability to share information with both providers and patients, CIS support the coordination of care across the continuum.

**Community Resources and Policies (CRP)** – When resources in the community are mobilized to meet the needs of patients, opportunities critical to patients and providers are created that may not be part of the health system or accessible to individual practitioners with limited resources.

---

*Continued from Page 1*

---

**Figure 1:** Wagner’s Chronic Care Model. Source: Wagner EH. Chronic disease management: What will it take to improve care for chronic illness? *Eff Clin Pract* 1998;1:2-4.
By forming partnerships with community organizations, there is the possibility of improving access and capacity, developing interventions to fill gaps in needed services, and create a greater alliance to advocate for policies to improve patient care.

**Health System (HS)** – When creating a system dedicated to the improvement of chronic illness care, HS elements highlight the need for visible support at all levels of the organization. Senior leadership needs to identify and communicate care improvement as important and promote transparent handling of errors and care problems to facilitate learning and system improvement.

In July of 2003, the CCM underwent further development. The expansion reflected newly identified desired content on patient safety, cultural competency, community policies and case management, and a stronger emphasis on care coordination. As a result, the MacColl Institute identified and developed these critical elements to give greater emphasis. The final version is entitled “The Care Model” and differs from the CCM in two significant ways: it includes the six aims from the IOM report as criteria for high-quality services, and adds change management concepts concerning staff development, cultural competence, care coordination and patient safety.

Meeting the needs of patients with chronic illness is one of the greatest challenges facing health organizations today. The CCM provides a framework for how health systems can bring about more effective and productive interactions between providers and patients. The changes necessary for superior chronic illness care might continue to seem insurmountable, but with strong leadership, effective change management and an engaged provider team, an organization can create a system in which patients achieve their goals and maintain their health with a chronic illness.

**References:**

---

**Live Well™: Optimizing Chronic Disease Management in Saskatoon Health Region and Beyond**

Leslie Worth, Donna J. Bleakney, Sheila Achilles, Dr. Darcy Marciniuk
Saskatoon Health Region Chronic Disease Management Executive, Saskatoon Health Region, Saskatoon, Saskatchewan

**Introduction**

Live Well™ is an integrated, evidence-based, interdisciplinary Chronic Disease Management (CDM) program in the Saskatoon Health Region (SHR, Saskatoon, Saskatchewan), which uses an innovative CDM model for care delivery with emphasis on system and behaviour change, including an appreciation for the commonalities across multiple chronic conditions. The challenge in developing effective CDM programs for our healthcare system, with many competing organizational initiatives, is to recognize the importance of managing chronic conditions as effectively as acute situations are managed. This approach to optimizing care is central to successfully dealing with many chronic medical conditions and includes patient-centred self-management interventions, clinical management by stepped protocol, outcomes evaluation, program management/cost, and coordination.