

Project 4 – Promote Patient Self-Management: Environmental Scan

Draft for Discussion

Scope: This environmental scan will address existing patient self-management programs and initiatives at the provincial, federal and international level. The results of the scan will be presented according to a structure based on the British Columbia Service Framework Approach to health system improvement.

Defining C-K-D: Substantial evidence indicates that patients who develop chronic kidney disease, diabetes or cardiovascular diseases are at significantly higher risk than the general population for one of the other chronic diseases (*Please see Appendix A for statistical data*). The evidence suggests that these diseases are related. The British Columbia C-K-D initiative aims to strategically and effectively prevent, diagnose, treat and manage these chronic diseases through innovative collaborative approaches.

Defining Patient Self-Management: As Lorig and Holman observe, “self-management is now a common term in health education and is the name attached to many health promotion and patient education programs” (2003, p 1). The overwhelming amount of patient self management material supports this finding. For example, in 2003, the Human Behaviour and Health Research Unit at Flinders University performed a chronic condition self management literature search, which returned 334 results (<http://som.flinders.edu.au/FUSA/CCTU/Chronic%20Condition%20Self.pdf>). In preparation for this environmental scan, two medical journal databases were searched. A keyword search for *patient self management* in the PubMed database resulted in over 9500 hits. A combined search for *self care* or *patient education* in Ovid’s Medline database yielded 60569 hits.

McGowan notes that there is “no ‘gold standard,’ universally accepted definition of self-management” (2005, p 1). He suggests that different definitional approaches to the term highlight different expectations for patients, providers and the systems within which they interact (McGowan, 2005, p 1). His paper proceeds to outline numerous definitions culled from myriad researchers, programs and policy statements.

This environmental scan will not follow a single definition, as the different programs and initiatives reviewed for the scan do not follow a single definition. It is helpful, however, to consider the common components that McGowan identifies as associated with patient self management:

- *participating in education/treatment or treatment designed to bring about specific outcomes;*
- *preparing people to manage their health condition on a day-to-day basis;*
- *practicing specific behaviors; and*
- *having the skills and abilities to reduce the physical and emotional impact of illness with or without the collaboration of the health care team (McGowan, 2005, p 2-3)*

General Self Management Strategies: Patient self management of chronic conditions can be encouraged via multiple strategies. These include a) The Flinders/Patient-Provider Collaborative Model and b) The Stanford/Group Learning & Support Model.

Flinders Model/Patient-Caregiver Collaboration: Coleman and Newton emphasize the role of the primary care provider in helping patients develop chronic disease self-management strategies. For example, they cite a “review of 41 studies assessing interventions to improve diabetes outcomes in primary care revealed that adding patient-oriented interventions can lead to improvements in outcomes such as glycemic control (Coleman & Newton, 2005, p 1503). The Flinders model of clinician administered self-management support, and the tools associated with it, provides physicians with a structured approach to discussing and planning self management strategies with patients (<http://som.flinders.edu.au/FUSA/CCTU/Self-Management.htm>). Key components include:

- *improves the partnership between the client and health professional(s)*
- *collaboratively identifies problems and therefore better (ie more successfully) targets intervention*
- *is a motivational process for the client and leads to sustained behaviour change*
- *allows measurement over time and tracks change*
- *has a predictive ability, i.e. improvements in self-management behaviour as measured by the PIH scale,¹ relate to improved health outcomes (Flinders Human Behaviour & Health Research Unit, 2005, p 2-3)*

The focus of this model is on the individual and the collaborative relationship developed between the patient and the health care provider. Coleman and Newton suggest physicians employ techniques such as motivational interviewing to fully realize the potential of physician-patient collaboration. They write, “motivational interviewing is an in-depth approach to decision making intended to help patients come to their own decisions by exploring their uncertainties. ... This style of interview, asking the patient provocative questions and discussing the responses, often can help uncover important self-management issues (Coleman & Newton, 2005, p 1505).

The tools associated with the Flinders model have been developed to be as generic as possible and therefore to be “applicable to any medical or psychiatric condition and co-morbidities” (<http://som.flinders.edu.au/FUSA/CCTU/Self-Management.htm>). Thus, this model is ideally suited to the C-K-D patient who has either one or more than one of the three chronic diseases.

¹ The Partners in Health (PIH) scale is a 12 part questionnaire for clients to complete. The results of this questionnaire can be interpreted by the general practitioner in order to assess the success of a patient’s self management strategy. For more information on the PIH scale, please see: Battersby et al. (2003). The Partners in Health scale: The development and psychometric properties of a generic assessment scale for chronic condition self-management, *Australian Journal of Primary Health*, 9, 41-52.

Stanford Model/Group Learning & Support: The Stanford model, pioneered by Dr. Kate Lorig and colleagues, focuses on group interaction and adult learning as essential components of successful patient-self management. An important element of this model is that the groups are facilitated by lay individuals. The group learning model can be divided into two broad categories:

1. *Group Learning/Disease Specific*

The Arthritis Self Management Program was the first to be developed and evaluated by the Stanford team (<http://patienteducation.stanford.edu/programs/asmp.html>). The success of this program has led to chronic-disease specific programs for HIV, Back Pain, Diabetes and Arthritis.²

2. *Group Learning/Non-Disease Specific*

The Chronic Disease Self-Management Program (CDSMP) was designed with the intention of having “people with different chronic health problems attend together. Workshops are facilitated by two trained leaders, one or both of whom are non-health professionals with a chronic diseases themselves” (<http://patienteducation.stanford.edu/programs/cdsmp.html>). In 2001, Lorig et al. published a study of CDSMP groups that contained members who were 40 years of age or older with heart disease, lung disease, stroke or arthritis. They found “evidence that participants, who had a mean of 2.2 chronic conditions and increased disability, did not show deterioration in any other health state variables as one would otherwise expect during a 2-year period” (2001, p 1221).

A crucial component of the Stanford/Group Learning & Support model is community involvement. Lorig’s team worked on a CDSMP study with Kaiser Permanente, an American integrated health care provider. The positive results led Kaiser Permanente to pursue collaboration “in several regions with community organizations such as employers, senior centers, faith-based organizations, and community clinics. These partnerships include consultation, joint training, recruitment, and promotion as well as sponsoring the programs” (Lorig et al., 2005, 78).

In the United States, the federal government’s *Health People 2010* report included the goal of “increasing the number of patients receiving self-management education” (Lorig et al., 2005, p 69). Federal promotion, combined with the support of private health providers and not-for-profits such as the Robert Wood Johnson Foundation (<http://www.rwjf.org/research/evaluationdetail.jsp?id=2155&ia=>), make it clear that patient self-management is a priority supported by numerous stakeholders in America.

Stanford vs. Flinders?: It is essential to note that these two approaches are not mutually exclusive. In fact, they are complimentary.³ Coleman and Newton, while emphasizing the patient-physician collaborative approach, for example, advise primary care providers to promote self-management education “by linking patients to community self-management programs” (2005, p 1505).

² For more on these programs, please see: <http://patienteducation.stanford.edu/programs/>

³ This point is emphasized by the Flinders group, please see: <http://som.flinders.edu.au/FUSA/CCTU/What%20is%20the%20difference.htm>

Nevertheless, it should be noted that the Flinders researchers “aimed to target a range of possible self-management interventions to the individual. This latter issue addressed the evidence that self-management group programs such as the Stanford course were attended by a small proportion (8-15%) of people with chronic conditions and the majority of these were women (86%)” (Foster, Kendall, Dickson, Chaboyer, Hunter *et al.*, 2003, as cited in:<http://som.flinders.edu.au/FUSA/CCTU/Self-Management.htm>).

Major International Patient Self Management Strategies and Programs: Patient self management research has led to innovative international programs, such as a significant patient self-management component in WHO’s Observatory on Health Care for Chronic Conditions web resource (http://www.who.int/chronic_conditions/implementation/en/). WHO’s website features Lorig and programs and initiatives that stem from the Stanford/Group Support & Learning approach and the Flinders Model.

Australia: In 1994, Australia’s National Chronic Disease Strategy has adapted the Stanford/Group Learning & Support model. In 2005, Australia began plans to launch a national chronic kidney disease strategy that follows the principles of the National Chronic Disease Strategy (<http://www.kidney.org.au/?section=86&subsection=443>). This suggests a trend away from CDSMP and towards disease-specific groups.

United Kingdom: The NHS adopted the Stanford model, calling it the expert patient programme (Battersby, 2004, p 1141). The expert patient programme has provided disease specific and non-disease specific courses. An internal evaluation of the program, based on a survey of 1000 subjects who took the courses between 2003 and 2005, found positive results, including an increase in patient self-confidence and a reduction in chronic illness patients’ use of NHS services (NHS, 2005, p1). The NHS recently introduced a trial of an online version of their program (<http://www.expertpatients.nhs.uk/online.shtml>). The online program is not disease specific. Evaluations of the online expert patient programme have yet to be published.

Patient Self Management & B.C.’s health care environment: Rachlis argues that Canada’s health system was built to handle acute illness, but would require major infrastructure changes to successfully integrate Chronic Disease Management (CDM). Despite this dire observation, he notes a number of Canadian CDM success stories, including:

- *Care for congestive heart failure in Sault Ste Marie*
- *Diabetic care in the Northwest territories*
- *Asthma and hypertension care in Taber*
- *COPD care in Quebec City*
- *Chronic disease initiatives in Calgary (Rachlis, 2004, p 4)*

The list could have also included B.C.’s CDM programs, including a) the CDM website for patients with chronic diseases, b) province-wide CDSMP meetings and c) integration of the physician-patient collaborative model. This environmental scan will briefly outline

major BC developments. Dr. Chris Rauscher will provide further information on the BC experience during the Project 3 C-K-D follow-up meeting on November 15th, 2005.

CDM Website: The BC MOH maintains a web resource for patients and health providers with links to information for patients living with each of the C-K-D diseases.⁴ Each of the three diseases is addressed on a separate webpage. The separate webpages for the different chronic diseases note that complications arising from one of the diseases could lead to the development of the other. For example: “Both Type 1 and Type 2 diabetes may lead to serious long-term complications, including blindness, heart disease, stroke, kidney failure and limb amputations” (<http://www.healthservices.gov.bc.ca/cdm/patients/diabetes/index.html>). It should be noted, however, that a webpage does not exist that addresses the concerns of patients suffering from more than one of these conditions.

CDSMP Groups: B.C. has also adapted Stanford University’s CDSMP. The B.C. version, which holds group programs in the five health authority regions, is led by the University of Victoria’s Centre on Ageing and funded via Health Canada’s Primary Healthcare Transition Fund (<http://www.coag.uvic.ca/cdsmp/>). Targeted CDSMP programs have focused on Diabetes and Arthritis. Generally, however, the BC CDSMP programs are not targeted to specific diseases. The Centre on Aging’s website notes:

Course participants are persons who are experiencing any type of chronic health condition; their significant others also are encouraged to attend. Although different chronic health conditions may have different physical impacts on a person’s body, they often cause similar problems related to activities of daily living, interactions with the health care system, communication with family and friends, and dealing with negative emotions such as fear, anxiety and depression (http://www.coag.uvic.ca/cdsmp/cdsmp_program.htm).

McGowan’s evaluation of the lay-led BC Diabetes Type II CDSMP *or* DSMP found statistically significant positive outcomes, including: improved communication with doctors; higher efficacy to self-manage disease symptoms; positive changes in diet; and, following prescription drug regimens (McGowan, 2004, p 12). Evaluations of BC CDSMP programs in Vancouver and Richmond in 2001 and 2003 indicated that participants had statistically significant health improvements (http://www.coag.uvic.ca/cdsmp/cdsmp_research.htm).⁵

Integration of the physician-patient collaborative model: The Northern Health Authority has been particularly successful in teaching physicians and medical office assistants (MOA) to speak directly to their patients about patient-self management issues and strategies. They have implemented and refined the 5-A’s approach promoted by WHO (Domes, Barg & Schimelfenig, 2005).⁶ The 5-A’s are:

⁴ Please see: <http://www.healthservices.gov.bc.ca/cdm/index.html>

⁵ It should be noted, however, that the reports with these findings are not available on the website at this time and are not properly referenced. Thus, they have not yet been identified.

⁶ For more information from WHO on the 5-A’s, please see: http://www.who.int/chronic_conditions/implementation/five_approach/en/index.html

- **Assess** *Evaluate behavior change status (and progress)*
- **Advise** *Personally relevant behavioral recommendations*
- **Agree** *Set specific collaborative, feasible goals*
- **Assist** *Help patient problem solve barriers*
- **Arrange** *Schedule follow-up contacts and coordinate resources (Glasgow, 2005)*

The Northern Health Authority has transformed the 5 A's into 3 questions (3 Q's):

- *What worries you most about your condition?*
- *What would you most like to change?*
- *How do you think you might do that? (Domes, Barg & Schimelfenig, 2005)*

By using the 3 Q's method, a personal action plan is devised in collaboration with the MOA. The physician's role is to reinforce the positive messages and strategies developed in the personal action plan. If patient consent is obtained, follow-up is conducted by the MOA via telephone (Domes, Barg & Schimelfenig, 2005).

Four Standards of Care for C-K-D & Patient Self Management: British Columbia is approaching a service framework approach to health (*Please see Appendix B*). Thus, it behooves the C-K-D initiative to consider how the promotion of patient self-management can be understood through the lens of the four standards of care in the service framework approach.

1. C-K-D prevention (Staying Healthy): This standard should be understood as applying to those patients who have been diagnosed with one of the three chronic diseases. Thus, prevention entails successful management of a single chronic condition with the goal of preventing or slowing the onset of a secondary chronic disease.

- *Individual: Patients with one of the diseases should be aware of the increased potential of developing the other two chronic diseases. Patients should also develop skills and lifestyle changes to prevent or slow onset.*
- *Individual: Vigilance and communication with health care providers are key*
- *Care provider: Physicians should target prevention via self-management messages at their patients who have already been diagnosed with one of the three chronic diseases*
- *Care provider: Physicians should routinely test the patient for the other two chronic diseases*
- *Care provider: Provide information on groups and community support systems*
- *Support System: Targeted information campaigns and group program information should be provided to patients who have developed one of the three chronic diseases*
- *Health Care Environment: Increase visibility of patient self-management tools in the province*

2. Early diagnosis of C-K-D (Getting Better) This standard should be understood as applying to those patients who are managing an acute event or the onset/diagnosis of a second C-K-D disease.

- *Individual: Patients should familiarize themselves with their new disease and seek information regarding living with multiple diseases simultaneously*
- *Care Provider: Continue prevention via self-management information dissemination to patient and new treatment regimens*
- *Care Provider: Continue to regularly test for third disease if patient only has two*
- *Care Provider: Provide information on groups and community support systems*
- *Care Provider: Assess the psychological needs of patient during this stage to ensure they receive needed support and in order to decide whether self-management strategies will be followed*
- *Support System: Targeted information campaigns and group program information should be provided to patients who have developed co-morbidities*
- *Health Care Environment: Increase visibility of patient self-management tools in the province*

3. Management of C-K-D (Living with Illness) This standard should be understood as applying to those patients who are managing two or more of the C-K-D chronic diseases.

- *Individual: Patients should participate in patient self-management groups*
- *Individual: Vigilance and communication with health care provider(s) are key*
- *Care Provider: Perform regular health assessment tests. Amend treatment regimen when required*
- *Care Provider: Continue to regularly screen for third disease*
- *Support System: Provide research updates, treatment news and other relevant information specific to those who have multiple chronic diseases in digestible lay format to patients via a variety of mediums*
- *Health Care Environment: Increase visibility of patient self-management tools in the province*

4. Supporting end stage C-K-D (Coping with End of Life) This standard should be understood as applying to those who have significantly advanced components of C-K-D.

- *Individual: Patient may not be able to perform self-management tasks at this point*
- *Care Provider: Must assess patient's ability to continue collaboration in combating chronic diseases*
- *Support System: Targeted information distribution and support group provision for survivors and care-takers*
- *Health Care Environment: Increase visibility of survivor and care-taker support tools in the province*

Service Framework Discussion Points:

- The issues in stage #1 and stage #3 are very similar.

- In B.C., it is clear that much of what is needed in stage #1 is provided via the provincial CDM. Information targeted towards those in stage #3 (*ie.* webpage for those who suffer from heart disease and kidney disease) is not available.
- The efficacy of patient self management programs and tools in all stages is largely dependent on the physiological well-being of the patient. This is especially important in stage #2, when disturbing new information is presented to the patient. When considering this stage, should we consider targeted information and support (*ie. mental health practitioners*) beyond the what B.C.'s CDM program provides?
- What is the role of the patient, as collaborator in their own health, in the end stages (stage #4) of the disease? Should patient self-management be a consideration at this point?

Appendix A

Canada

Disease	Statistic	Source
Diabetes	Diabetes is a contributing factor in the deaths of approximately 41,500 Canadians each year. Canadian adults with diabetes are twice as likely to die prematurely, compared to persons without diabetes.	Health Quality Council. <i>Chronic Disease Management</i> . 2004: http://www.hqc.sk.ca/portal.jsp?V6ADFD0NmPRD+4vt8vmeKjBIzBf0QfLQkUwK4QBZaJvwO9ghh5dfuYzOVcA+lmY4#Improving_patient_care
	Approximately 2 million Canadians have diabetes. The rate is three to five times higher among Aboriginal people.	Public Health Agency of Canada. <i>Diabetes</i> . 2005: http://www.phac-aspc.gc.ca/ccdpc-cpcmc/diabetes-diabete/english/index.html
	41,483 adult Canadians with diabetes died in 1999/2000.	Health Canada. <i>Responding to the Challenge of Diabetes in Canada: First Report of the National Diabetes Surveillance System (NDSS) 2003</i> . 2003: II.
Cardiovascular Diseases	In 1999, Cardiovascular Diseases were responsible for 36% of all deaths in Canada, making it the leading cause of death in the country.	Public Health Agency of Canada. <i>Cardiovascular Disease Surveillance Online</i> . 2005: http://dsol-smed.phac-aspc.gc.ca/dsol-smed/cgi-bin/cvdchart2?AREA=00&YEAR=99&SEX=3&CCAUSECORE1=View+Chart&AGE=0&DATA_TYPE=A_PIE&PIE_CAUSE=008%3B002%3B003%3B009%3B018%3B109&PIE_ALL=001
	Cardiovascular diseases are the underlying cause of death for 1 in 3 Canadians.	Heart and Stroke Foundation of Canada. <i>The Growing Burden of Heart Disease and Stroke in Canada 2003</i> . 2003: 9.
Kidney Diseases	Recent estimates suggest that as many as 1.9 million Canadians have CKD – most are unaware of it.	The Kidney Foundation of Canada. <i>Kidney Disease: Am I at Risk?</i> 2004: 5
C-K-D Relationship Data	Approximately 80% of people with diabetes will die as a result of heart disease or stroke.	Health Quality Council. <i>Chronic Disease Management</i> . 2004: http://www.hqc.sk.ca/portal.jsp?V6ADFD0NmPRD+4vt8vmeKjBIzBf0QfLQkUwK4QBZaJvwO9ghh5dfuYzOVcA+lmY4#Improving_patient_care
	As many as 30% of people with diabetes also suffer from kidney disease.	BC Renal Agency. <i>Working Together for Better Kidney Health</i> . 2005: http://www.bcrenalagency.ca

	<p>Chronic conditions are the major cause of illness, disability and death in Canada. In 1997, there were a total of 215,669 deaths in Canada with more than 75 per cent of the deaths attributable to one of the following five chronic diseases: cancer, cardiovascular disease, diabetes, kidney disease and respiratory disease.</p>	<p>Province of Manitoba. <i>News [sic] Diabetes and Chronic Disease Prevention Initiative Announced</i>. 2004: http://www.gov.mb.ca/chc/press/top/2004/12/2004-12-07-03.html</p>

British Columbia

Disease	Statistic	Source
Diabetes	Provincial disease prevalence and incidence rates indicate a diabetes epidemic. Currently, 196,467 British Columbians have been diagnosed with diabetes, and this number is expected to increase 90% by 2010.	BC Health Services. <i>Chronic Disease Management: Update 2003, Year One in Review</i> . 2003: http://www.healthservices.gov.bc.ca/cdm/research/update2003.pdf
Cardiovascular Diseases	According to Health Canada's <i>Cardiovascular Disease Surveillance Online</i> program, 10,154 British Columbians died of cardiovascular diseases in 1999.	Public Health Agency of Canada. <i>Cardiovascular Disease Surveillance Online</i> . 2005: http://dsol-smed.phac-aspc.gc.ca/dsol-smed/cgi-bin/cvdchart2?DATA_SET=MORT&DATA_TYPE=D&YEAR1=99&CAUSE1=008&AGE1=0&SEX1=3&CPROV1=View+Chart
Kidney Diseases	An estimated 145,000 British Columbians may suffer from kidney disease.	BC Renal Agency. <i>Working Together for Better Kidney Health</i> . 2005: http://www.bcrenalagency.ca
C-K-D Relationship	Business cases provided compelling evidence that improved diabetes and congestive heart failure management could save BC's health system approximately \$34 million and \$25 million, respectively, in three years.	BC Health Services. <i>Chronic Disease Management: Update 2003, Year One in Review</i> . 2003: http://www.healthservices.gov.bc.ca/cdm/research/update2003.pdf

Relationship between Diabetes, Cardiovascular Disease and Kidney Disease: A Selection of Statistics from Recent Medical Journal Articles

Statistic	Source
<p>Populations with certain chronic metabolic disorders (eg, diabetes and chronic renal failure) are at substantially increased risk of cardiovascular disease (CVD). Compared with the general population, few epidemiological studies of the determinants of CVD have been done in these groups. This situation is unfortunate, because the absolute risks of myocardial infarction, stroke, and congestive heart failure among some such individuals may be high, so the absolute benefits of effective treatments could also be large.</p>	<p>Baigent C; Burbury K; Wheeler D. Premature cardiovascular disease in chronic renal failure. <i>Lancet</i>. 2000 Jul 8; 356(9224):147.</p>
<p>It remains unclear how much of the association between kidney and vascular disease results from (1) vascular disease causing kidney disease, (2) kidney disease causing vascular disease, or (3) common underlying factors promoting the progression of both.</p>	<p>Curtis B; Parfey P. Congestive Heart Failure in Chronic Kidney Disease: Disease-specific Mechanisms of Systolic and Diastolic Heart Failure and Management. <i>Cardiology Clinics</i>. 2005, 23: 278.</p>
<p>Cardiac mortality for dialysis patients younger than 45 years is more than 100 times greater than in the general population of the United States.</p>	<p>Baigent C; Burbury K; Wheeler D. Premature cardiovascular disease in chronic renal failure. <i>Lancet</i>. 2000 Jul 8; 356(9224):147.</p>
<p>The United Kingdom Prospective Diabetes Study found that almost 40% of patients starting dialysis have diabetes.</p>	<p>Levin A; Stevens L; McCullough P. Cardiovascular disease and the kidney: Tracking a killer in chronic kidney disease. <i>Postgraduate Medicine Online</i>. 2002 April; 111(4): http://www.postgradmed.com/issues/2002/04_02/levin.htm.</p>
<p>Almost half of those Americans who were receiving renal replacement therapy in 1999 had a primary diagnosis of diabetes mellitus, particularly type 2, and more than one quarter a primary diagnosis of hypertension.</p>	<p>Brown WW; Collins A; Chen SC; King K; Molony D; Gannon MR; Politoski G; Keane WF. Identification of persons at high risk for kidney disease via targeted screening: the NKF Kidney Early Evaluation Program. <i>Kidney International. Supplement</i>. 2003 Feb; (83):S50.</p>
<p>Cardiovascular disease is the leading cause of death in dialysis patients, accounting for almost half the deaths in this population.</p>	<p>St Peter WL; Schoolwerth AC; McGowan T; McClellan WM. Chronic kidney disease: issues and establishing</p>

	programs and clinics for improved patient outcomes. <i>American Journal of Kidney Diseases</i> . 2003 May; 41(5):903.
Even after stratification by age, gender, race, and the presence or absence of diabetes, cardiovascular mortality in dialysis patients is 10 to 20 times higher than in the general population.	Foley RN; Parfrey PS; Sarnak MJ. Epidemiology of cardiovascular disease in chronic renal disease. <i>Journal of the American Society of Nephrology</i> . 1998 Dec 9; (12 Suppl):S16.

Appendix B

Service Framework Planning Matrix

	Levels of Health Status			
Levels of Health	Staying Healthy	Getting Better	Living with Illness	Coping with End of Life
Individual				
Care Providers				
Support Systems				
Health Care Environment				

As presented in: *A Guide to the Development of Service Frameworks in British Columbia*. September 20, 2005: 7.

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- Stanford Patient Education Research Center. *Chronic Disease Self-Management Program – Patient Education*. 2005: <http://patienteducation.stanford.edu/programs/cdsmp.html>
- World Health Organization. *Tools for Clinical Prevention and Management*. 2005: http://www.who.int/chronic_conditions/implementation/en/