CANADIAN NURSES ASSOCIATION

Effectiveness of Registered Nurses and Nurse Practitioners in Supporting Chronic Disease Self-Management

A Public Health Agency of Canada Funded Project

March 2012

50 Driveway
Ottawa, ON K2P 1E2

Tel.: 613-237-2133 or 1-800-361-8404
Fax: 613-237-3520
Website: cna-aiic.ca

April 2012

TABLE OF CONTENTS

INTRODUCTION

Chronic disease continues to be a critical focus in public health, both in Canada and globally. While the overall health of Canada's population is considered sufficiently, especially in comparison to many other countries, the management and prevention of chronic diseases in Canada represents one of the biggest challenges to our health-care system, taking a significant toll on the health-care system, economy and quality of life. The Health Council of Canada (2007) reports that a third of Canadians have at least one chronic health condition, and that two-thirds die as a result of cancer, cardiovascular disease, Type 2 diabetes and chronic obstructive lung disorders. And, according to Statistics Canada (2009), these figures will likely increase, given that the number of Canadians over the age of 65 is expected to rise from 4.2 million in 2005 to 9.8 million by 2036. Annually, chronic diseases are already estimated to cost the health system over $90 billion in treatment and lost productivity (Mirolla, 2004).

For Canadians with chronic diseases, there is growing interest in self-management support programs that emphasize the patients' central role in managing their illness. Self-management complements traditional patient education by helping patients achieve the best possible quality of life with their chronic condition. Registered nurses (RNs) and nurse practitioners (NPs) are in daily contact with patients — applying behavioural and psychological strategies, linking to community supports, collaborating with teams and addressing determinants of health — to reduce inequities associated with an increased incidence of chronic diseases (Registered Nurses'Association of Ontario, 2010). Self-management support leads to patient outcomes that show improved problem-solving skills, self-efficacy, decision-making, health status, and health-care utilization. In the broader context of managing chronic diseases, self-management support may improve the patient-nurse therapeutic relationship, while reducing hospitalizations and the number of days in hospital.

The Canadian Nurses Association (CNA) has a long-standing history of leading self-care and chronic disease issues in Canada, across the lifespan and the continuum of care. As early as 1999, CNA sought to assist health-care professionals, especially nurses and physicians, in supporting self-care in their practices. In 2002, with the Health Canada funded report, *Supporting Self-Care: A Shared Initiative,* CNA demonstrated that many Canadians require strategic and effective support to manage their own chronic diseases.

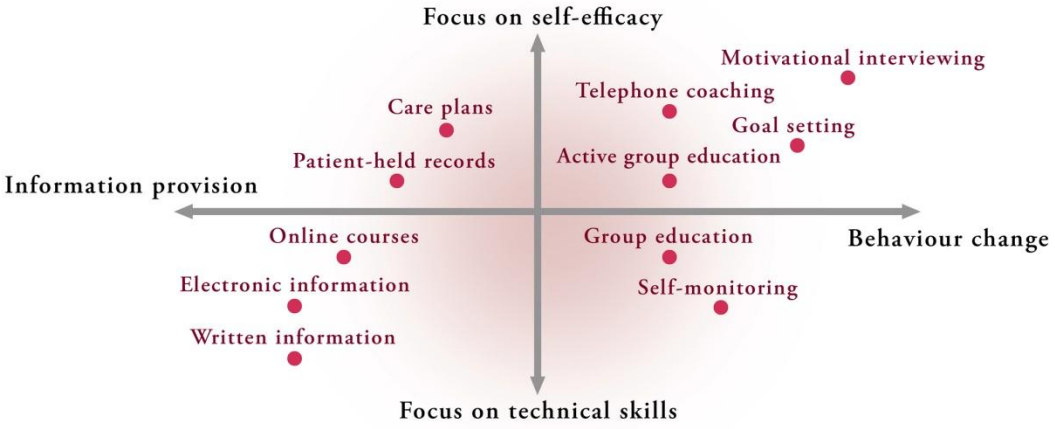
CNA (2011) knows very well how RNs and NPs, who have the highest proportion of direct interaction among all health-care providers, work with Canadians to prevent and manage chronic illnesses and play an integral role in every aspect of health promotion and disease prevention. Accordingly, CNA, with funding from the Public Health Agency of Canada, has recently conducted an environmental scan — including a literature review, a review of nursing best practice guidelines, key informant interviews, and a focused discussion — to further define and advance the role of RNs and NPs in self-management for Canadians with chronic diseases and to support quality outcomes for the client, the provider and the system.

Drawing on Paterson, et al. (2009) this research uses the following definition of chronic disease self-management:

Patients with chronic disease[s] have the confidence, choice and ability to effectively manage their symptoms, treatment, physical, emotional and social consequences, and lifestyle changes. The interventions identified as supporting self-management include key components, such as skill building, tools and resources, education and behavioural counselling and overcoming structural barriers.

A National Health Service model (Health Foundation, 2011), which shows a continuum of positive strategies to support self-management, was also used (see Figure 1).

Figure 1: Continuum of Strategies to Support Self-Management



FINDINGS

The results of the environmental scan clearly demonstrate the unique contribution of RNs and NPs in supporting effective chronic disease self-management across the continuum of care as a key part of Canadian health-care solutions (Baker & Denis, 2011; Edwards & Grinspun, 2011; Laurant, et.al., 2009).

Individual

- Enhanced RNs' and NPs' roles improve patient outcomes (Renders, et.al., 2009; Taylor et. al., 2005; Christensen, et.al., 2008; Tsai, et.al., 2005; Wong, et.al., 2011; Inglis, et.al., 2011; Parker, et.al., 2008).
- NP support has led to consistent results on reducing smoking and alcohol use, shorter hospital stays, decreased hospital admissions and more appropriate office visits (Tomblin Murphy, 2005).
- Adapting interventions and selecting supports and resources unique to each patient can favourably affect health and functional status, mortality rates, use of hospitalization and nursing homes, and costs (Walters, et.al., 2010; Revere & Dunbar, 2001; Given, et.al., 2010).
- RNs and NPs need confidence in their positions within chronic disease prevention and management in order to take on leadership roles and optimize their scope of practice.
- Nurses experience ethical dilemmas both in managing and empowering clients and in setting system priorities such as health-system design, billing and remuneration.
- RNs need to clearly articulate their roles in chronic disease self-management (CNA, 2009a).
- RNs and NPs have limited educational resources available for developing creative ways to work with patients.

Organizational

- Educating other health professionals and the public on the role of RNs and NPs in primary health care is needed (DiCenso & Matthews, 2005; Schofield, et. al., 2011; CNA, 2007; Yukon Registered Nurses Association, 2004; College of Family Physicians of Canada, 2007; CNA, 2006).
- While RNs and NPs have the service and organizational support to apply their knowledge and skills within a therapeutic, established relationship, broadening their scope of practice and role as coordinators is necessary.
- Higher levels of patient satisfaction and quality care have resulted from RNs and NPs support of complex patients in primary care settings, which are achieved by providing holistic care, health promotion action and addressing the broad determinants of health (Horrocks, et.al., 2002; Laurant, et.al., 2009).

System

- To improve access, broader context considerations are needed for vulnerable groups, including an understanding of the cultural and social context for complex patients.
- Awareness and understanding of the NP role on the part of patients and other providers facilitate integration of NPs in primary health care and are key to high satisfaction rates by patients.
- Social determinants of health, substance use and mental health are significant barriers for many Canadians to the success of chronic disease self-management.
- There is a need in self-management to shift the emphasis towards community and network-centred approaches, which may prove more appropriate for engaging people in socially and economically deprived contexts.
- Few reports address the complexities of remuneration differences between providers and the impact this has on collaboration and resource planning in health services (Watson & Wong, 2005).

Gaps in Research

The following gaps in research related to chronic disease prevention self-management were identified:

- Challenges in measurement for evaluation of effectiveness, outcomes and process indicators (Renders, et.al., 2009).
- Lack of RN and NP involvement in research and planning
- Lack of use regarding health quality of life (HQL) measures
- Limited and perhaps under-assessed RN and NP contributions
- Limited comprehensive cost and economic evaluations research
- Insufficient discussion in the literature of the specific types of networks that support or undermine self-management, as well as a poor understanding of the processes involved (Vassilev, et.al., 2010).
- Need to shift research beyond professional- or individual-centred conceptual frameworks (Vassilev, et.al., 2010).
- Lack of research on the complexities of remuneration differences between providers and its impact on collaboration and resource planning in health services (Renders, et.al., 2009; Markle-Reid, et.al., 2006; Barlow & Ellard, 2004).

POLICY RECOMMENDATIONS

Individual

- RNs and NPs in all domains of practice must be in a position to take up the challenge of becoming an integral part of a new accord, in every provincial and territorial jurisdiction.
- Nurses work through their professional associations to advocate for innovative applications to be built into system redesign.

Organizational

- Health-care organizations provide interprofessional teams, with frameworks and strategic support for chronic disease self-management, incorporating the social determinants of health.
- Health-care organizations and nursing associations provide nurses with self-directed learning modules on chronic disease self-management.
- Nursing education programs incorporate chronic disease self-care management in curriculum with an emphasis on primary health care and the social determinants of health.

System

- Governments at all levels ensure adequate funding for a patient-driven health-care system with improved home care and primary care integration, including appropriate health human resource staffing.
- Governments at all levels ensure adequate funding for strategic priorities to improve access to chronic disease self-management in rural and remote practice environments and in vulnerable populations.
- Governments at all levels ensure adequate funding for electronic health records across the continuum of care.
- Nursing associations and nursing unions collaborate to advocate for broader roles for RNs and NPs in chronic disease self-management across the continuum of care.
- Nursing associations advocate for improved integration and interprofessional collaboration in the healthcare system for effective chronic disease self-management.
- Nursing associations raise awareness about the role of RNs and NPs in chronic disease self-management to the public and other health-care providers.
- Nursing associations and other health-care organizations coordinate advocacy efforts for consistency and uniformity of electronic data systems and indicator development.
- Research groups support new research and new researchers on the effectiveness of current team approaches to chronic disease self-management.
- Research groups explore capturing data on the social determinants of health.

CONCLUSION

RN and NP leadership has had a significant impact in many regions of Canada, from the NPs in the North, to a nursing station on Vancouver Island, to services in the Maritimes and community health centers in Ontario. Such "opportunities" come from strong advocacy and hard work by the RNs and NPs who know the issues and their communities (CNA, 2009b). Attending to professional roles for effective chronic disease self-management is at the heart of RNs' and NPs'contributions to client care, which apply health and human knowledge to the client context within a therapeutic relationship. Next steps include facing the challenges and opportunities for RNs and NPs to become engaged in system transformation for chronic disease prevention self-management based on best evidence and known approaches.

REFERENCES

Aglukkaq, L. (2011). *Minister of health speech, Canadian medical association annual general assembly*. Retrieved from http://www.hc-sc.gc.ca/ahc-asc/minist/speeches-discours/_2011/2011_08_22-eng.php.

Ayalon, L., Gum, A., Felician, L., & Arean, P. (2006). Effectiveness of non-pharmacological interventions for the management of neuropsychiatric symptoms in patients with dementia. *Archives of Internal Medicine*, 166(20), 2181-2188.

Baker, G., & Denis, J.-L. (2011). *A comparative study of three transformation healthcare systems: Lessons for Canada. Ottawa: Canadian Health Services Research Foundation*. Retrieved from http://www.chsrf.ca/PublicationsAndResources/ResearchReports/ArticleView/11-10-26/0d3e9041-a834-4511-9f95-7c37ba287a79.aspx.

Barlow, J., & Ellard, D. (2004). Psycho-educational interventions for children with chronic disease, parents and siblings: An overview of the research evidence base. *Child: Care, Health and Development,* 30(6), 637-645.

Baron, R., Melillo, S., Rimer, B., Coates, R., Kerner, J., Habarta, N., Chattopadhyay, S., Sabatino, S., Elder, R., & Jackson Leeks, K. (2010). Intervention to increase recommendation and delivery of screening for breast, cervical, and colorectal cancers by healthcare providers: A systematic review of provider reminders. *American Journal of Preventive Medicine*, 38(1), 110-117.

Betihavas, V., Newton, P., Du, H., Macdonald, P., Frost, S., Stewart, S., & Davidson, P. (2011). Australia's health care reform agenda: Implications for the nurses' role in chronic heart failure management. *Australian Critical Care*, 24(3), 189-197.

Bradshaw, T., Lovell, K., & Harris, N. (2005). Healthy living interventions and schizophrenia: A systematic review. *Journal of Advanced Nursing,* 49(6), 634-654.

College of Family Physicians of Canada (The). (2007). *Position statement: Improving access to care for patients in Canada.* Retrieved from http://www.cfpc.ca/uploadedFiles/Resources/Resource_Items/CFPC20Position20Statement-20ENG20.pdf.

Canadian Home Care Association. (n.d.). *Vision of home care 2020: A vision of health, independence and dignity.* Mississauga, ON: Author. Retrieved from http://www.cdnhomecare.ca/content.php?doc=243.

Canadian Nurses Association. (2011). *Promoting physical activity: Brief to the House of Commons standing committee on health.* Ottawa: Author. Retrieved from http://www.cna-aiic.ca/CNA/documents/pdf/publications/Brief_on_physical_activity_e.pdf.

Canadian Nurses Association. (2010). NP-led clinics: Ontario leads the way. Ottawa: Author. *Canadian Nurse,* 106(9), 30-35.

Canadian Nurses Association. (2009a). *Recommendations of the Canadian nurse practitioner initiative: Progress report.* Ottawa: Author. Retrieved from http://www2.cna-aiic.ca/CNA/documents/pdf/publications/CNPI_report_2009_e.pdf.

Canadian Nurses Association. (2009b). *Position statement: The nurse practitioner*. Ottawa: Author. Retrieved from http://www2.cna-aiic.ca/CNA/documents/pdf/publications/PS_Nurse_Practitioner_e.pdf.

Canadian Nurses Association. (2009c). *The next decade: CNA's vision for nursing and health. Ottawa: Author.* Retrieved from http://www.cna-aiic.ca/en/on-the-issues/the-next-decade/.

Canadian Nurses Association. (2008). *Advanced nursing practice: A national framework.* Ottawa: Author. Retrieved from http://www2.cna-aiic.ca/CNA/documents/pdf/publications/ANP_National_Framework_e.pdf.

Canadian Nurses Association. (2007). *Framework for the practice of registered nurses in Canada.* Ottawa: Author. Retrieved from http://www.srna.org/images/stories/pdfs/nurse_resources/2009_RN_framework.pdf.

Canadian Nurses Association. (2006). *The way forward plan: Committing to action*. Ottawa: Author. Retrieved from http://www2.cna-aiic.ca/CNA/documents/pdf/publications/cnpi/tech-report/section7/01_Way_Forward.pdf.

Canadian Nurses Association. (2002). *Supporting self care: A shared initiative – 1999-2002*. Ottawa: Author. Retrieved from http://www2.cna-aiic.ca/CNA/documents/pdf/publications/Supporting_Selfcare_e.pdf.

Canadian Nurses Association. (1999). *RN & Baccalaureate Education.* Ottawa: Author. Retrieved from http://www.cna-aiic.ca/en/becoming-an-rn/education/rn-baccalaureate-education/.

Christensen, H., Griffiths, K, Gulliver, A., Clack, D., Kljakovic, J., & Wells, L. (2008). Models in the delivery of depression care: A systematic review of randomised and controlled intervention trials. *BMC Family Practice*, 9(25), 1-10.

Community Health Nurses of Canada. (2011). *Canadian community health nursing: Professional practice model & standards of practice*. Toronto: Author. Retrieved from http://www.chnc.ca/documents/CHNC-ProfessionalPracticeModel-EN/index.html.

Community Health Nurses of Canada. (2008). *Community health nursing vision 2020: Shaping the future*. (Working document). Toronto: Author. Retrieved from http://www.chnc.ca/documents/CommunityHealthNursingVision2020ShapingtheFuture.pdf.

Cooper, C., Wheeler, D., Woolfenden, S., Boss, T., & Piper, S. (2009). Specialist home-based nursing services for children with acute and chronic illnesses. Melbourne: *Cochrane Database of Systematic Reviews*, 1, CD004383.

Coulter, A., & Ellins, J. (2007). Effectiveness of strategies for informing, educating, and involving patients. *British Medical Journal*, 335(24), 24-27.

Decima Research. (2006). *Public opinion for the Canadian nurse practitioner initiative: Wave 2 (2006) – Final report.* Ottawa: Author. Retrieved from http://www2.cna-aiic.ca/CNA/documents/pdf/publications/cnpi/tech-report/section1/05_Report_AppendixD.pdf.

Department of Health (UK). (2008). *Common core principles to support self care: a guide to support implementation. London: Author. Skills for Care, Skills for Health.* Retrieved from http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH_084505.

DiCenso, A., & Bryant-Lukosius, D. (2010). *Clinical nurse specialists and nurse practitioners in Canada: A decision support synthesis.* Toronto: Canadian Health Services Research Foundation. Retrieved from http://www.chsrf.ca/PublicationsAndResources/ResearchReports/CommissionedResearch/10-06-01/b9cb9576-6140-4954-aa57-2b81c1350936.aspx.

DiCenso, A., & Matthews, S. (2005). *Report on the integration of primary health care nurse practitioners into the province of Ontario.* Toronto: Ontario Ministry of Health and Long-Term Care.

Retrieved from http://www.health.gov.on.ca/english/public/pub/ministry_reports/nurseprac03/exec_summ.pdf.

Edwards, N., & Grinspun, D. (2011). *Understanding whole systems change in healthcare: The case of emerging evidence-informed nursing service delivery models*. *Toronto: Canadian Health Services Research Foundation*. Retrieved from http://www.chsrf.ca/publicationsandresources/researchreports/ArticleView/11-10-07/7eccd93b-a091-4d01-b625-3cd8279afbc2.aspx.

Foster, G., Taylor, S., Eldridge, S., Ramsay, J., & Griffiths, J. (2009). Self-management education programmes by lay leaders for people with chronic conditions. Melbourne: *Cochrane Database of Systematic Reviews*, 1, CD005108.

French, J., Bilton, D. & Campbell, F. (2008). Nurse specialist care for bronchiectasis. Melbourne: *Cochrane Database of Systematic Reviews*, 1, CD004359.

Furler, J., Harris, M., & Rogers, A. (2011). Equity and long-term condition self-management. *Chronic Illness*, 7(3), 3-5.

Gallant, M., Spitze, G., & Grove, J. (2010). Chronic illness self-care and the family lives of older adults: A synthetic review across four ethnic groups. *Journal of Cross-Cultural Gerontology*, 25(1), 21-43.

Given, C., Given, B., Sikorskii, A., You, M., Jeon, S., Champion, V., & McCorkle, R. (2010). Deconstruction of nurse-delivered patient self-management interventions for symptom management: Factors related to delivery enactment and response. *Annals of Behavioural Medicine*, 40(1), 99-113.

Glazier, R., Kennie, N., Bajcar, J., & Willson, K. (2006). A systematic review of interventions to improve diabetes care in socially disadvantaged populations. *Diabetes Care,* 29(7),1675-1688.

Gonseth, J., Guallar-Castillón, P., Banegas, J., & Rodriquez-Artalejo, F. (2004). The effectiveness of disease management programmes in reducing hospital re-admission in older patients with heart failure: A systematic review and meta-analysis of published reports. *European Heart Journal,* 25(18), 1570-95.

Health Council of Canada. (2007). *Why health care renewal matters: Learning from Canadians with chronic health conditions*. Toronto: Author.

Health Council of Canada. (2011). *How do sicker Canadians with chronic disease rate the health care system? Results from the 2011 commonwealth fund international health policy survey of sicker adults.* Toronto: Author.

Health Foundation (The). (2011). *Evidence: Helping people help themselves: A review of the evidence considering whether it is worthwhile to support self-management*. London, UK: Department of Health. Retrieved from http://www.health.org.uk/publications/evidence-helping-people-help-themselves/.

Hodnett, E., Fredericks, S., & Weston, J. (2010). Support during pregnancy for women at increased risk for low birthweight babies. Melbourne: *Cochrane Database of Systematic Reviews*, 6, CD000198.

Horrocks, S., Anderson, E., & Salisbury, C. (2002). Systematic review of whether nurse practitioners working in primary care can provide equivalent care to doctors. *British Medical Journal*, 324, 819-23.

Inglis, S., Clark, R., McAlister, F., Ball, J., Lewinter, C., Cullington, D., Stewart, S., & Cleland, J. (2011). Structured telephone support or telemonitoring in the management of patients with chronic heart failure. Melbourne: *Cochrane Database of Systematic Reviews*, 8, CD007228.

Laurant, M., Reeves, D., Hermens, R., Braspenning, J., Grol, R., & Sibbald, B. (2009). Substitution of doctors by nurses in primary care. Melbourne: *Cochrane Database of Systematic Reviews*, 1, CD001271.

Lewis, S. (2010). The last word: So many voices, so little voice. *Canadian Nurse*, 106(8), 40.

MacDonald, M., Regan, S., Davidson, H., Schreiber, R., Crickmore, J., & Moss, L. (2006). Knowledge translation to advance the nurse practitioner role in British Columbia. *Healthcare Policy*, 1(2), 80-89.

Markle-Reid, M., Browne, G., Weir, R., Gafni, A., Roberts, J., & Henderson, S. (2006). The effectiveness and efficiency of home-based nursing health promotion for older people: A review of the literature. *Medical Care Research and Review*, 63(5), 531-569.

McAlister, F., Stewart, S., Ferrua, S., & McMurray, J. (2004). Multidisciplinary strategies for the management of heart failure patients at high risk for admission: A systematic review of randomized trials. *Journal of the American College of Cardiology*, 44(4), 810-819.

MacMillan, H. (2000). Preventive health care, 2000 update: Prevention of child maltreatment. *Canadian Medical Association Journal*, 163(11), 1451-1458.

Mirolla, M. (2004). *The cost of chronic disease in Canada.* Ottawa: Chronic Disease Prevention Alliance of Canada. Retrieved from http://www.gpiatlantic.org/pdf/health/chroniccanada.pdf.

Muenchberger, H., & Kendall, E. (2010). Predictors of preventable hospitalizations in chronic disease: Priorities for change. *Journal of Public Health Policy*, 31(2), 150-163.

National Collaborating Centre for Methods and Tools. (2010). *Critical appraisal of intervention studies. Sharing what works in public health*. Hamilton: Author. Retrieved from http://www.nccmt.ca/en/modules/cais/keydocs/glossary.php.

Nolte, E., Knai, C., & McKee, M. (2008). *Managing chronic conditions: Experience in eight countries. European Observatory on Health Systems and Policies*. Brussels: Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0008/98414/E92058.pdf.

Parker, D., Mills, S., & Abbey, J. (2008). Effectiveness of interventions that assist caregivers to support people with dementia living in the community: A systematic review. Melbourne: *Cochrane Database of Systematic Reviews*, 8, CD007228.

Paterson, B., Kealy, L., MacKinnon, R., McGibbon, C., van den Hoonaard, D., & LaChapelle, D. (2009). "Chronic diseases self-management practice in Canada: Patterns, trends and programs" [Unpublished Paper].

Registered Nurses' Association on Ontario. (2010). *Strategies to support self-management in chronic conditions: Collaboration with clients.* Toronto: Author. Retrieved from http://www.rnao.org/Page.asp?PageID=924&ContentID=3320.

Registered Nurses' Association of Ontario. (2007). *Nursing: The future. Future roles of clinical nurses. ONP Health Canada.* Toronto: Author. Retrieved from http://www.rnao.org/Storage/33/2762_Future_Roles_Clinical_Nurses_ONP.pdf.

Renders, C., Valk, G., Griffin, S., Wagner, E., van Eijk, J., & Assendelft, W. (2009). Interventions to improve the management of diabetes mellitus in primary care, outpatient and community settings. Melbourne: *Cochrane Database of Systematic Reviews*, 1, CD001481.

Revere, R., & Dunbar, P. (2001). Review of computer-generated outpatient health behaviour interventions: Clinical encounters "in absentia." *International Journal of the American Medical Informatics Association*, 8(1), 62-79.

Schofield, R., Ganann, R., Brooks, S., McGugan, J., Dalla Bona, K., Betker, C., Dilworth, K., Parton, L., Reid-Haughian, C., Slepkov, M., & Watson, C. (2011). Community health nursing vision for 2020: Shaping the future. *Western Journal of Nursing Research*, 33(8), 1047-1068.

Shaw, E., Levitt, C., Wong, S., & Kaczorowski, J. (2006). Systematic review of the literature on postpartum care: Effectiveness of postpartum support to improve maternal parenting, mental health, quality of life, and physical health. *Birth*, 33(3), 210-220.

Spenceley, S., & Williams, B. (2006). Self-care from the perspective of people living with diabetes. *Canadian Journal of Nursing Research*, 38(3), 124-145.

Statistics Canada. (2009). *CANSIM table 102-4501*. Ottawa: Author. Retrieved from http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=1024501&paSer=&pattern=&stByVal=1&p1=1&p2=-1&tabMode=dataTable&csid=.

Taylor, S., Candy, B., Bryar, R., Ramsay, J., Vrijhoef, H., Esmond, G., Wedzicha, J., & Griffiths, C. (2005). Effectiveness of innovations in nurse led chronic disease management for patients with chronic obstructive pulmonary disease: A systematic review of evidence. *British Medical Journal*, 335, 485.

Tomblin Murphy, G. (2005). *Health human resource planning, modeling activities for primary health care nurse practitioners*. Ottawa: CNA Canadian Nurse Practitioner Initiative.

Tsai, A., Morton, S., Mangione, C., & Keeler, E. (2005). A meta-analysis of interventions to improve care for chronic illnesses. *American Journal of Managed Care*, 11(8), 478-488.

Vassilev, I., Rogers, A., Sanders, C., Kennedy, A., Blickem, C., Protheroe, J., Bower, P., Kirk, S., Chew-Graham, C., & Morris, R. (2010). Social networks, social capital and chronic illness self-management: A realist review. *Chronic Illness*, 7(1), 60-86.

Viswanathan, M., Kraschnewski, J., Nishikawa, B., Morgan, L., Thieda, P., Honeycutt, A., Lohr, K., & Jonas, D. (2009). Outcomes of community health worker interventions. Rockville, MD: Agency for Healthcare Research and Quality (US). (*Evidence Reports/Technology Assessments*, No. 181.)

Walters, J., Turnock, A., Walters, E., & Wood-Baker, R. (2010). Action plans with limited patient education only for exacerbations of chronic obstructive pulmonary disease. Melbourne: *Cochrane Database of Systematic Reviews*, 5, CD005074.

Watson, D., & Wong, S. (2005). *Canadian policy context: Interdisciplinary collaboration in primary health care. Toronto: Enhancing Interdisciplinary Collaboration in Primary Health Care Initiative (EICIP), Health Canada*. Retrieved from http://www.eicp.ca/en/resources/pdfs/Canadian-Policy-Context-Interdisciplinary-Collaboration-in-Primary-Health-Care.pdf.

Weingarten, S., Henning, J., Badamgarav, E., Knight, K., Hasselblad, V., Gano, Jr., A., & Ofman, J. (2002). Interventions used in disease management programmes for patients with chronic illness – which ones work? Meta-analysis of published reports. *British Medical Journal*, 325, 1-8.

Wilkinson, A., & Whitehead, L. (2009). Evolution of the concept of self-care and implications for nurses: A literature review. *International Journal of Nursing Studies*, 46(8), 1143-1147.

Wong, C., Carson, K., & Smith, B. (2011). Home care by outreach nursing for chronic obstructive pulmonary disease. Melbourne: *Cochrane Database of Systematic Reviews*, 3, CD000994.

Yukon Registered Nurses Association. (2004). *Nurse practitioners and issues for the Yukon.* Whitehorse: Author. Retrieved from http://www.yrna.ca/assets/NPissues.pdf.