



**Rethinking Health Care in Rural  
and Northern Ontario**

**Submission to the Rural and  
Northern Health Care Panel**

**November 18, 2009**



## **1. Rethinking Health Care in Rural and Northern Communities**

The Registered Nurses' Association of Ontario (RNAO) is the professional association representing registered nurses in Ontario. Since 1925, RNAO has advocated for healthy public policy, promoted excellence in nursing practice, increased nurses' contribution to shaping the health-care system, and influenced decisions that affect nurses and the public they serve.

We are pleased to offer this submission to the Rural and Northern Health-Care Panel. Rural and northern communities face distinct and long-standing challenges in accessing health care. The development of a Rural and Northern Health Care Framework is long overdue, but very welcome. We want to ensure that stage one of the process – the work of the panel – delivers changes worthy of the wait.

Before addressing the questions posed by the Ministry of Health and Long-Term Care in its invitation to us, we will start with our hopes for the framework development process, in the current context.

The context is, of course, the budgetary pressure confronting many health care organizations during a recession that is also damaging local communities, their families and individual citizens. The recession was not of Ontario's making, and RNAO joined most analysts and organizations in supporting deficit spending by the province, in order to soften the impact of the recession and to reduce its duration and severity. The combined efforts of provincial and national governments have indeed helped stop the economy's freefall, but jobs have yet to return and many communities remain in dire straits.

Small communities now face a further assault as the province moves to deal with its deficit: already hurting from job losses, their stretched hospitals and community services have been cut back further or face cuts due to deficits. Particularly in northern and rural communities, local hospitals not only provide scarce health care services, they are also hubs for the community and major employers in those communities. Any northern and rural hospital cutbacks represent a disproportionately large blow to the people served by, and serving in, those hospitals.

The framework development process must respond to the unique context of rural and northern communities. It is imperative that the local communities most directly affected be consulted in an open and transparent way and that the input derived from those consultations be used in a meaningful way in any subsequent action. Part of that consultation will take place in the planned second stage of framework development. We believe however that the panel would also benefit from hearing from affected communities, to better fulfil its mandate.<sup>1</sup> This present consultation is a start, but we urge that the panel also consult with people where they live, work and use local health and hospital services, holding open and accessible hearings within rural and remote communities across the province.

Furthermore, we are concerned that some restructuring will take place even before the consultation process is completed. While organizations like the Ontario Medical Association and the Ontario Health Coalition have called for a halt to hospital cuts and

closures until the panel completes its review, Health and Long-Term Care Minister Deb Matthews has reportedly rejected these calls, saying she didn't want to prevent Local Health Integration Networks (LHINs) from dealing with budget deficits.<sup>2</sup> As we saw in the 1990s, restructuring can be very destructive and is essentially irreversible.

We know from the Auditor General that the last round of hospital closures resulted in costs that were much higher than anticipated. For example, capital costs alone were \$3.9 billion instead of the estimated \$2.1 billion.<sup>3</sup> The Auditor General also found that often anticipated savings never materialized.<sup>4</sup> Thus, savings may be elusive and costs higher than anticipated. Finally, job and spending losses due to hospital cutbacks have ripple effects through the local economy, resulting in further hidden costs. One study concluded that more than one job would be lost outside of health care for each hospital job lost.<sup>5</sup> In a vulnerable part of a wounded economy, we must move with caution.

Thus, the call for a moratorium on cuts and closures will not only make for more meaningful consultations; it will also help to avoid costly restructuring before the necessary information is received.

**What are the top 3 challenges or barriers to accessing health-care services in rural, remote and northern areas today?**

We consider the following challenges: identifying and meeting the unique health-care needs in these areas, availability of health-care professionals, and access to community care services including primary health care and home health care, as well as the prospect of hospital cutbacks and closures.

**Meeting the unique health care needs in rural, remote and northern areas**

Empowering local communities to design health services that meet each communities' needs and allow for the provision of care as close to home as possible is essential to achieving healthy and sustainable communities. The application of typical population-based ratios for the allocation of health-care resources leads to inequitable access to health-care services in low density population areas of the province where issues of critical mass, distance and support are often lacking.

Northern and Rural communities also do not have the economic base to raise funds to support capital infrastructure development for health-care facilities, equipment and research. This is consistently ignored in policy decisions and contributes to measurable health care inequities and differences in access to care.

Transportation to access health-care resources remains a significant challenge. As an example trauma patients in northern and rural centres of the province regularly wait hours for transportation to trauma services. Consideration needs to be given to a dedicated northern and rural emergency transportation system, or the present system of transport needs to be completely overhauled.

Populations in Northern and Rural areas of the province are aging faster than the provincial average. Capital and operating investments in long-term care and supportive housing are required immediately to avoid hospital crowding and further compromise of access to acute services.

## Availability of health-care professionals

Employment levels for RNs in Ontario substantially lag behind the national average. To bring the nurse-to-population ratio up to the equivalent of the rest of Canada would require employment of over 15,000 more RNs.<sup>6</sup> The Ontario Government undertook to start rectifying the gap by promising in 2007 to add 9,000 nursing positions over its second mandate (by 2011). However, in the fall 2008 economic update, the brunt of government cutbacks fell on nurses (\$50 million) with a delay in nursing hires. There is a real risk that in its second mandate the government will fall well short of its nursing promise. Northern and rural communities suffer greatly from the government's shortfall on delivering an appropriate supply of RNs, and this is further aggravated by shortfalls in full-time employment opportunities.

Sadly, nurses employed in small hospitals in rural and small towns in Ontario are less likely to have full-time employment than urban nurses employed in larger hospitals. A recent study found that "[a]s of July 2005, only 9 per cent of small hospitals had met the 70 per cent full-time employment target using MOHLTC's [Ministry of Health and Long-Term Care] 2004-05 classification of full-time nurse... 15 per cent of small hospitals had fewer than 46% of annual nursing hours worked by full-time nurses."<sup>7</sup> "16 per cent of rural hospital RNs and 17 per cent of rural hospital RPNs held two or more nursing positions."<sup>8</sup> However, a substantial number of part-time nurses working in small hospitals would prefer full-time employment. "If all RNs had their preferred employment status, the proportion of full-time RNs would increase 10 percentage points, from 58 per cent to 68 per cent. Similarly, if all RPNs had their preferred employment status, the proportion of full-time RPNs would increase from 46 per cent to 67 per cent. These estimates take into account the 4 per cent of full-time nurses who preferred part-time work."<sup>9</sup> "A lack of full-time positions was the most often mentioned reason for not working full time by nurses who could be considered "involuntary part-time workers." Lack of seniority was the second most commonly mentioned reason."<sup>10</sup> In addition, the eclectic nature of nursing practice in small hospitals requires a unique preparation and support for new graduates who enter their chosen profession as novices and are at risk of being overwhelmed by the breadth and depth of requirements in smaller centres where there are both more expectations and often fewer supports.

Access to registered nurses is an essential component of vibrant communities and optimal health outcomes. There is clear evidence that demonstrates care provided by registered nurses is associated with better health outcomes in a variety of settings such as hospitals,<sup>11 12 13</sup> long-term care,<sup>14 15</sup> and the community.<sup>16 17 18</sup> To take but one example, a systematic review of the literature found that greater RN staffing was associated with lower hospital mortality such that an increase by one RN full time equivalent (FTE) per patient day would save five lives per 1,000 hospitalized patients in intensive care units, five lives per 1,000 hospitalized medical patients, and six lives per 1,000 hospitalized surgical patients.<sup>19</sup> In a variety of settings, RNs and NPs have proved beneficial to clients with chronic care conditions by successfully decreasing utilization of health-care resources, improving patient satisfaction, and improving quality of life.<sup>20 21 22 23</sup>

The shortage of primary care providers is equally concerning. In 2008, one in 12 adults did not have a nurse practitioner, family physician<sup>24</sup> or other primary care provider. This is especially acute for the 30 per cent of Ontarians who live in

northern, rural and under-serviced communities (Data from the Ministry's Underserved Areas Program<sup>25</sup> confirm that the large majority of areas underserved family practitioners are in the North or are smaller towns.), but access can be just as difficult in some southern urban centres. Nurse practitioners (NPs) in both primary and acute care settings have been shown to supplement and complement other roles<sup>26 27</sup> and improve access to essential health services. However, many NPs in Ontario are not being fully utilized and are unable to practise to their full scope.<sup>28</sup>

### **Access to community care services, including primary health care, health determinants and home health-care services.**

As Ontario's population grows older, the incidence of chronic illness will increase. Chronic disease is too often poorly managed, generally within an illness model which is characterized by frequent emergency department visits and hospital readmissions with long lengths of stay.<sup>29</sup> This 'illness model' is focused on diagnosis, treatment and cure. While this may be appropriate for acute illnesses, such as heart attack or stroke, this approach is not well suited to the management of chronic disease.

In transitioning from an illness orientation to a wellness orientation, prevention becomes the new priority at all points in the continuum of care. The current government has developed a Chronic Disease Prevention and Management Framework that has a wellness orientation.<sup>30</sup> A large number of studies show that the benefits of this model in managing chronic illness include:

- Decreased health-care utilization, including fewer emergency department visits, fewer hospital readmissions, and decreased length of stay;<sup>31 32</sup>
- Improved quality of life for clients;<sup>33</sup>
- Improved quality of care;<sup>34</sup>
- Improved client satisfaction;<sup>35</sup> and,
- Improved health-care provider satisfaction.<sup>36</sup>

Registered nurses are well positioned to manage and deliver care to clients with chronic disease. The nursing model provides a holistic approach that is effective in managing chronic disease and preventing complications.<sup>37</sup> It addresses the needs of individuals and families from diagnosis to management and end-of-life decision-making by providing support to patients, families, and caregivers.

RNs and NPs working in primary care and home care help to bridge the gap in continuity of care between the acute care sector and independent community living. This can empower people to make important self-care decisions, participate meaningfully in their treatment, and take charge of their overall health and well-being.<sup>38</sup>

RNs and NPs have proved beneficial to clients with chronic care conditions by successfully decreasing utilization of health-care resources, improving patient satisfaction, and improving quality of life.<sup>39 40 41 42</sup>

### **Looming cutbacks and closures in the hospital sector.**

As noted above, the already strained health system in rural and northern Ontario faces additional stress of potential losses in the hospital sector. The previous round of costly hospital restructuring in the 1990s is a warning to proceed with caution this time around. The direct costs were higher than anticipated. Hidden costs (such as job losses in industries that supplied services to closed hospitals) were substantial. And savings were not as large as anticipated. Prudence would dictate waiting until there is enough consultation to make informed restructuring decisions. Restructuring decisions made under duress are likely to be suboptimal.

Beyond that, history also teaches us that when there are not stable, sustainable full-time nursing positions in this province, registered nurses will leave the province and the country. The economic investment that is made in the education of these valuable professionals is yet another hidden cost, unaccounted for when individual agencies rush to balance budgets on the backs of nursing. As taxpayers, we have supported the costs of that education – where is the return on that investment when policy and decision-making drive the product of that investment out of our communities?

#### **What do you feel should be the founding vision for improving access to health care in rural, remote and northern areas of the province?**

People in all parts of Ontario should have equitable access to health and all essential health-care services. In addition, as we address the health-care needs of people we must also urgently address the social determinants of health.

Health care is an important determinant of health. However, Ontario must hasten policy imperatives to address all other determinants of health – including the province's poverty reduction strategy. This would go a long way to addressing determinants of health in rural and northern areas, as well as in urban areas. It is important that the unique needs of rural and northern communities are taken into account when addressing determinants of health.

#### **What are the guiding principles that are needed to support the province and LHINs in their decision-making?**

- **Transparency and accountability for decision-making.** This is essential for robust decision-making, and for political sustainability of the health-care system.
- **Responsiveness to local needs, which are to be assessed through local consultation.** The consultation provides essential information about local needs, and also constructively engages the public, empowering them to take greater ownership of their health-care system.
- **Addressing all determinants of health, which is essential to population health and well-being.** Health inequities reflect social inequities, as an

abundance of research demonstrates.<sup>43 44 45 46 47 48 49</sup> Such factors as education, occupation, income, gender, race and ethnicity have significant impacts on health outcomes. We must strive to eliminate health gradients due to social position.

Evidence of the connection between environment and health is well established. The World Health Organization (WHO) estimates that environmental factors account for 24 per cent of the world's burden of disease and 23 per cent of all deaths.<sup>50</sup> Environment is estimated to play a larger part in some diseases, such as asthma (44 per cent).<sup>51</sup> While the costs to human health are higher in developing countries, environmental factors have a significant impact on many diseases across the globe. Seventeen per cent of deaths in developed regions were attributed to environmental factors.<sup>52</sup> In developed regions, environment plays a more significant role in chronic diseases such as lung cancer (30 per cent).<sup>53</sup> The Ontario Medical Association has concluded that 9,500 deaths per year in Ontario are attributable to a limited number of air pollutants alone,<sup>54</sup> and the health costs associated with these pollutants is more than \$8 billion per year.<sup>55</sup> Both international and Canadian evidence show that these impacts are disproportionately borne by lower income people.<sup>56 57 58 59 60 61</sup>

Accordingly, the key filter for decision-making must be the impact on health. We want to mobilize our resources to have the healthiest population possible, and not simply the most health care services. Yes, LHINs are in the business of delivering health-care services, but they can address all determinants of health in the course of their decision-making and not just health care. For example, they should consider the health impacts of a possible hospital closure not just due to the loss of services, but also due to the effect on secure employment in the region.

- **Provision of all essential health-care services to all residents of Ontario, out of the public purse.** The omissions of pharmacare and home care represent significant gaps in health care, which our system ought to provide. Universal coverage through a single payer has huge advantages:
  - It is fairer in that everyone is covered.
  - It thus helps to avoid a great deal of unnecessary illness and death, such as occurs in systems like the U.S. where an estimated 137,000 working-aged adults died prematurely between 2000 and 2006 because they did not have access to health insurance.<sup>62</sup> Unpaid medical bills are the leading cause of bankruptcy in the United States<sup>63</sup> with health problems contributing to about half of all bankruptcies.<sup>64</sup>
  - It is vastly more cost-efficient. For example, per capita health care administrative costs in the U.S. were \$1,059 in 1999 compared to \$307 in Canada.<sup>65</sup>
- **Provision of health services on a not-for-profit basis**
  - There is abundant experience and research on the hazards of a market

approach to health care compared with the advantages of not-for-profit financing and delivery of health-care services. A review of four decades of experience with privatization in the United States with a combination of public funding and private health-care management and delivery found that “for-profit health institutions provide inferior care at inflated prices.”<sup>66</sup>

- Private contracting in the U.S. Medicare program for seniors through the Medicare health maintenance organization (HMO) contracting program is a cautionary tale in that it evolved into a multi-billion dollar subsidy for HMOs who often cherry-pick the healthiest clients while rejecting those most acutely and expensively ill.<sup>67</sup>
- The experience of public-private competition in the United States is that for-profit “firms carve out the profitable niches, leaving a financially depleted public sector responsible for the unprofitable patients and services.”<sup>68</sup>
- Considerable evidence is available on quality of care differences between for-profit and not-for-profit delivery across sectors. Studies show that the quality of care in for-profit institutions is lower.<sup>69 70 71 72 73</sup> The most conclusive evidence comes from systematic reviews and meta-analyses of peer-reviewed literature on for-profit versus not-for-profit health care, which found higher patient mortality rates in for-profit as compared to not-for-profit centres.<sup>74 75</sup> One compelling example is that patients attending for-profit dialysis had 8 per cent higher death rates than those who received care at non-profit facilities. This translates into an estimated 2,000 premature deaths each year in the United States linked to for-profit dialysis.<sup>76</sup>
- Furthermore, worse health outcomes have also come with higher costs: a systematic review and meta-analysis of peer-reviewed literature concluded that for-profit hospitals charge a statistically significant 19 per cent more than not-for-profit hospitals.<sup>77</sup>
- Canadian evidence from the long-term care sector has found that staffing levels were higher in not-for-profit facilities than in for-profit facilities,<sup>78</sup> and health outcomes were better in not-for-profit facilities.<sup>79 80</sup> Differences in staffing were likely to result in the observed differences in health outcomes.<sup>81</sup> A review of North American nursing home studies between 1990 and 2002 similarly concluded that for-profit homes appeared to deliver poorer quality care in a number of process and outcome areas.<sup>82</sup>
- **Eliminating competitive bidding as a way of allocating health care contracts.**
  - Experiments in introducing competitive bidding in the health-care sector have proven unsuccessful both in Ontario and internationally. The reasons for this are extensive and complex. They include: our limited ability to fairly price and cost health-care services and different levels of complexity in these services; the expensive nature of systems required to capture and audit information; and low measurability of health-care services, which impedes effective performance monitoring.<sup>83</sup> For competitive bidding to be effective, we must be able to measure not only the services themselves, but also their quality. Yet

we cannot effectively quantify these services, or their quality. Price, on the other hand, is easily quantified, and that leads inevitably to a competitive bidding process biased toward awarding on price rather than quality. This makes competitive bidding an expensive, inefficient way of attempting to ensure quality services and value-for-money in health-care services.

- In Ontario, competitive bidding has resulted in serious disruptions in continuity of care and caregiver for patients, decreased morale amongst caregivers and, as a consequence, it has adverse impacts on the availability of community-based care and access and quality of care the public receives.
- **Eliminating Alternative Financing and Procurement as a means of managing and funding capital expenditures in health.**
  - The Ontario government continues to use a program of Alternative Financing and Procurement (AFPs), a form of public-private partnerships (P3s), to build and operate hospitals and other public infrastructure. Its position is that AFPs are not P3s because they remain publicly owned and controlled. However, AFPs are still privately financed and partially operated by parallel private administrations. Currently there are more than 12 large P3/AFP hospital projects underway or being considered in Ontario. These are generally 20 to 30 year deals that feature finance, build and service privatization.<sup>84</sup>
  - In his report released December 8, 2008, the Auditor General of Ontario confirmed what critics of P3s had been saying all along: the Brampton P3 hospital cost taxpayers considerably more than if it had been built by traditional public/not-for-profit procurement. He found the difference in cost to have been \$194 million in 2003 dollars, not including an additional \$200 million difference because of the higher financing costs of the P3 and a further \$63 million in additional modifications. On top of that, the P3 hospital took longer to build and opened with 479 beds instead of the promised 608 originally planned.<sup>85</sup>
  - While the Auditor acknowledged the government's claims that the newer AFP projects have improved public disclosure, transparency and evaluation over the P3 hospitals, there is no evidence in his report that those claims are justified. They remain privately financed, and the government has yet to commit to public operation of these facilities. Many of the problems associated with these public-private partnerships, including higher costs and lower quality of service, arise from private financing and operations.<sup>86 87 88 89 90 91 92 93</sup>
  - In addition to the direct impacts on finance, delivery, and quality of each project, there are the broader political and policy implications of the P3/AFP method of financing. It creates a new and powerful stakeholder group – the private consortiums – whose clear long-term interest is the expansion of health-care privatization. Although the current government has restricted the scope of private intrusion into the public sector, these are decisions that a future government with a different philosophy could easily reverse, using the AFP structure created by this government to pursue a much more aggressive privatization strategy.

- **Ensuring that any restructuring decisions are subject to a full cost/benefit analysis, including indirect costs to individuals, agencies and communities.**

**What are the top 3 changes/strategies that you feel will have the most impact in improving access to health care in rural, remote and northern areas?**

We consider three strategies: a rural and northern nursing strategy, addressing all health determinants, and broad consultation.

- **Develop a nursing strategy targeted to the needs of rural and northern communities:**
  - **Restore funding to add the promised 9,000 nursing positions.**
    - As discussed above in Question 1, adequate access to nursing services is important to health outcomes, and Ontario would require over 15,000 more RNs to catch up with the RN/population ratio of the rest of the country. Delivering on the promised 9,000 nursing positions is an essential step towards righting that imbalance. Delivering now is important because we risk losing new graduates to other jurisdictions if we do not create the positions for them now. This would improve the situation across the province, including in rural and northern areas.
  - **Expand the 1:1 tuition reimbursement to new graduates who choose to relocate to northern, rural and underserved communities.**
    - Currently, the 1:1 tuition reimbursement program applies only to students who graduate from northern and rural communities.<sup>94</sup> We strongly recommend that this excellent program be expanded to also include RN and RPN graduates of any Ontario nursing program who choose to relocate to northern and rural communities.
  - **Provide funding to more closely reflect the demographics of selected rural and remote communities**
    - Provide dedicated funding and specific access options to support the entry of First Nations, Métis and Inuit students into nursing schools
  - **Adequately prepare and support faculty and RN students for the broad scope of work:**
    - Provide targeted funding for northern universities and colleges to support PhD education for faculty.
    - Develop and fund specialized RN education programs for rural and northern nursing.
    - Fund more rural and northern clinical placements for RN students, including specifically funding travel and housing costs for students who elect to take clinical practice placements in rural and northern communities.
    - Develop and fund programs to orient and mentor new hires in rural

and northern settings.

- **Maximize and fast track the opening of NP-Led clinics to broaden access to primary health care.**
  - Nurse practitioners are registered nurses with additional educational preparation and experience who possess and demonstrate the competencies to diagnose autonomously, order and interpret diagnostic tests, prescribe pharmaceuticals and perform specific procedures within their legislated scope of practice.<sup>95</sup>
  - The need for NP-led clinics offering primary care is undeniable. NPs possess the knowledge and skills to provide a point of entry to health promotion and disease prevention as well as curative, rehabilitative and supportive services for individuals and families throughout their lifespan. Nurse-led clinics in other countries have alleviated pressure from shortages in health human resources, resulting in: decreased wait times; more fully integrated pathways of care; enhanced continuity of care; improved access to care; and cost containment.<sup>96</sup>
  - The government promised to open 25 new NP-led clinics by 2011 in addition to the highly successful NP-led clinic in Sudbury. NP-led clinics improve access to primary care and improve quality of life for thousands of patients and their families.<sup>97</sup> There is widespread interest in establishing NP-led clinics, with dozens of communities just waiting for the green light from the provincial government.
- **Address social, environmental and economic inequities that affect health inequities, such as poverty, inequitable distribution of resources and power, racial background.**
  - As discussed above, health care is an important determinant of health, but it is only one determinant. It is simply unacceptable in a rich society that so many people suffer ill health and die because of their low incomes. We can do better, and we must. That starts with getting serious about all determinants of health.
- **Consult broadly with all stakeholders on how to address access to health care.**
  - In particular, ensure that communities with inequitable access to health care are consulted: Aboriginal communities; racialized communities; lower income people; and rural and northern communities.
  - People want to be consulted when they believe that their opinions will be heard and will count. Our own members have contacted us expressing the hope that they might be able to join a consultation and provide local nursing perspectives.

**Any other comments that you feel are important for the panel to consider at this early stage of planning.**

- Investments in evaluative research are essential to determine policy

interventions that would improve population health outcomes of people living in northern and rural communities.

- A major public concern is possible losses of community-based hospital services due to budgetary shortfalls, but the questions do not directly address this issue. We have raised it in our submission, but we feel that the panel should proactively address possible cuts and closures.
- The questions also do not address the underlying fundamental issue of how to deal with social inequities in all communities and the unique challenges to social and health equity in rural and northern Ontario.
- The government must address social inequities and population health such as affordable quality child care, decent housing, access to resources, and good jobs particularly in those communities devastated by the collapsing manufacturing sector.
- We urge the panel to consult broadly now before writing its report. The panel needs to hear from diverse communities across the province, including First Nation communities, large and small on the lack of access to essential health services. Many social, economic and environmental factors that affect population health are unique to one community or another and the panel needs to hear from and appreciate the different circumstances.
- We urge the government to place a moratorium on hospital cuts and closures until the panel and the government have finished their consultation process, and until the panel has given the government its considered advice.
- We urge the government and the LHINs to weigh carefully all social costs and benefits before hospital restructuring, as savings have proven elusive while costs have been underestimated.

We appreciate the opportunity to present the views of Ontario's nurses and contribute to the work of the Rural and Northern Health-Care Panel.

## References

---

- <sup>1</sup> Farrell, M. (2009). Rural and Northern Health Care Panel Terms of Reference. Ontario Ministry of Health and Long-Term Care. Oct. 5.
- <sup>2</sup> Leslie, K. (2009). Activists, doctors call for moratorium on Ontario hospital cuts, closings. CP
- <sup>3</sup> Office of the Provincial Auditor. (2001). 2001 Annual Report. Toronto: Author. 315.
- <sup>4</sup> Office of the Provincial Auditor. (1999). 1999 Annual Report. Toronto: Author. 171.
- <sup>5</sup> Centre for Spatial Economics. (2009). The Economic Impact of Hospital Closures in Ontario. Toronto: Author. Prepared for Ontario Health Coalition, January 31, 2009. Slides 3 and 4.
- <sup>6</sup> That gap of 15,279 was calculated for 2007, the latest year for which national data were available. RN data from Canadian Institute for Health Information's (CIHI) RN Database. Population data from CIHI's National Health Expenditure database. Calculations by RNAO.
- <sup>7</sup> Sloan, C., Pong, R., Rukholm, E., Larocque, S., & Pitblado, R. (2006). Full-time/part-time employment of nurses in small hospitals in rural and northern Ontario: current status, issues, and options. Sudbury: Centre for Rural and Northern Health Research, Laurentian University. September 20. p. ii. Retrieved from [http://www.cranhr.ca/pdf/70\\_Full-Time\\_Nursing\\_Emp\\_in\\_Small\\_Hospitals\\_2006\\_summ.pdf](http://www.cranhr.ca/pdf/70_Full-Time_Nursing_Emp_in_Small_Hospitals_2006_summ.pdf).
- <sup>8</sup> Ibid, iv
- <sup>9</sup> Ibid, iv.
- <sup>10</sup> Ibid, iv.
- <sup>11</sup> Needleman, J., Buerhaus, P., Mattke, S., Stewart, M., & Zelevinsky, K. (2002). Nurse-staffing levels and the quality of care in hospitals. *New England Journal of Medicine*, 346 (22), 1715-1722.
- <sup>12</sup> Tourangeau, A.E., Giovannetti, P., Tu, J. V., & Wood, M. (2002). Nursing-related determinants of 30-day mortality for hospitalized patients. *Canadian Journal of Nursing Research*, 33(4), 71-88.
- <sup>13</sup> McGillis Hall, L., Doran, D. & Pink, G. (2004). Nursing staffing models, nursing hours and patient safety outcomes. *Journal of Nursing Administration*, 34(1), 41-45.
- <sup>14</sup> Horn, S., Buerhaus, P., Berstrom, N. & Smout, R. (2005). RN staffing time and outcomes of long-stay nursing home residents: pressure ulcers and other adverse outcomes are less likely was RNs spend more time on direct patient care. *American Journal of Nursing*, 105(11), 58-70.
- <sup>15</sup> Horn, S. (2008). The business case for nursing in long-term care. *Policy, Politics, & Nursing Practice*, 9(2), 88-93.
- <sup>16</sup> Olds, D., Ecenrode, J, Henderson, C, Kitzman, H, Powers, J, Cole, R. et al. (1997). Long-term Effects of Home Visitation on Maternal Life Course and Child Abuse and Neglect. *Journal of the American Medical Association*. 278, 637-643.
- <sup>17</sup> Markle-Reid, M., Weir, R., Browne, G., Roberts, J. Gafni, A., & Henderson, S. (2006). Health promotion for frail older home care clients. *Journal of Advanced Nursing*, 54(3), 381-395.
- <sup>18</sup> O'Brien-Pallas, L., Doran, D., Murray, M., Cockerill, R., Sidani, S., et al. (2002) Evaluation of a client care delivery model, part 2: Variability in client outcomes in community home nursing. *Nursing Economic\$,* 20(1), 13-21, 36.
- <sup>19</sup> Kane, R., Shamiyan, T., Mueller, C., Duval, S., & Wilt, T. (2007). The association of registered nurse staffing levels and patient outcomes: Systematic review and meta-analysis. *Medical Care*. 45 (12), 1197.
- <sup>20</sup> Bourbeau, J., Julien, M., Maltais, F., Rouleau, M., Beapre, A., Begin, R., Renzi, P., Nault, D., Borycki, E., Schwartzman, K., Singh, R., Collet, J. (2003). Reduction of hospital utilization in patients with chronic obstructive pulmonary disease: a disease-specific self-management intervention. *Archives of Internal Medicine*, 163(5), 585-591.
- <sup>21</sup> Wong, F., & Chung, L. (2005). Establishing a definition for a nurse-led clinic: Structure, process and outcome. *Journal of Advanced Nursing*, 53(3), 358-369.
- <sup>22</sup> Chan, M., Yee, A., Leung, E. & Day, M. (2006). The effectiveness of a diabetes nurse clinic in treating older patients with type 2 diabetes for their glycaemic control. *Journal of Clinical Nursing*, 15, 770-781.

- 
- <sup>23</sup> Denver, E., Barnard, M., Woolfson, R., & Earle, K. (2003). Management of uncontrolled hypertension in a nurse-led clinic compared with conventional care for patients with type 2 diabetes. *Diabetes Care*, 26(8), 2256-2260.
- <sup>24</sup> Ontario Health Quality Council. (2008). How is Ontario's publicly funded health system performing? QMonitor: 2008 Report on Ontario's Health System, Toronto: Author, 12.
- <sup>25</sup> Ontario Ministry of Health and Long-Term Care. (2009). List of Areas Designated as Underserved (LADAU) for General/Family Practitioners. Retrieved November 18, 2009 from [http://www.health.gov.on.ca/english/providers/program/uap/listof\\_areas/gp\\_ladau.pdf](http://www.health.gov.on.ca/english/providers/program/uap/listof_areas/gp_ladau.pdf).
- <sup>26</sup> Cowan, M., Shapiro, M., Hays, R., Afifi, A., Vazirani, S., Ward, C., et. al. (2006). The effect of a multidisciplinary hospitalist/physician and advanced practice nurse collaboration on hospital costs. *Journal of Nursing Administration*, 36(2), 79-85.
- <sup>27</sup> DiCenso, A., & Matthews, S., (2005). Report on the Integration of Primary health care Nurse Practitioners in the province of Ontario: Executive Summary (revised). Hamilton: IBM & McMaster University.
- <sup>28</sup> DiCenso, A., & Matthews, S., (2005). Report on the Integration of Primary health care Nurse Practitioners in the province of Ontario: Executive Summary (revised). Hamilton: IBM & McMaster University, 19.
- <sup>29</sup> World Health Organization. (2005). The impact of chronic disease in Canada. Retrieved November 18, 2009 from: [http://www.who.int/chp/chronic\\_disease\\_report/media/CANADA.pdf](http://www.who.int/chp/chronic_disease_report/media/CANADA.pdf)
- <sup>30</sup> Ministry of Health and Long Term Care. (2005). Guide to chronic disease management and prevention. Family Health Teams Advancing Primary Health Care, 1-12.
- <sup>31</sup> Bourbeau, J., Julien, M., Maltais, F., Rouleau, M., Beupre, A., Begin, R., Renzi, P., Nault, D., Borycki, E., Schwartzman, K., Singh, R., Collet, J. (2003). Reduction of hospital utilization in patients with chronic obstructive pulmonary disease: a disease-specific self-management intervention. *Archives of Internal Medicine*, 163(5), 585-591.
- <sup>32</sup> Sidorov, J. (2006). Reduced health care costs associated with disease management for chronic heart failure: a study using three methods to examine the financial impact of a heart failure disease management program among Medicare advantage enrollees. *Journal of Cardiac Failure*, 12(8), 594-600.
- <sup>33</sup> Hui, E., Yang, H., Chan, L., Or, K., Lee, D., Yu, C., Woo, J. (2006). A community model of group rehabilitation for older patients with chronic heart failure: a pilot study. *Disability Rehabilitation*, 28(23), 1491-1497.
- <sup>34</sup> Kimmelstiel, C., Levine, D., Perry, K., Patel, A., Sadaniantz, A., Gorham, N., Cunnie, M., Duggan, L., Cotter, L., Shea-Albright, P., Poppas, A., LaBresh, K., Forman, D., Brill, D., Rand, W., Gregory, D., Udelson, J., Lorell, B., Konstam, V., Furong, K., Konstam, M. (2004). Randomized, controlled evaluation of short- and long-term benefits of heart failure disease management within a diverse provider network: the SPAN-CHF trial. *Circulation*, 110(11), 1450-1455.
- <sup>35</sup> Hennell, S., Spark, E., Wood, B., George, E. (2005). An evaluation of nurse-led rheumatology telephone clinics. *Musculoskeletal Care*, 3(4), 233-240.
- <sup>36</sup> Sciamanna, C., Alvarez, K., Miller, J., Gary, T., Bowen, M. (2006). Attitudes toward nurse practitioner-led chronic disease management to improve outpatient quality of care. *American Journal of Medical Quality*, 21(6), 375-381.
- <sup>37</sup> Bourbeau, J. (2003). Disease-specific self management programs in patients with advanced chronic obstructive pulmonary disease: a comprehensive and critical evaluation. *Disease Management and Health Outcomes*, 11(5), 311-319.
- <sup>38</sup> Hanson-Turton, T. & Miller, M. (2006). Nurses and nurse-managed health centers fill healthcare gaps. *The Pennsylvania Nurse*, 18.
- <sup>39</sup> Bourbeau, J., Julien, M., Maltais, F., Rouleau, M., Beupre, A., Begin, R., Renzi, P., Nault, D., Borycki, E., Schwartzman, K., Singh, R., Collet, J. (2003). Reduction of hospital utilization in patients with chronic obstructive pulmonary disease: a disease-specific self-management intervention. *Archives of Internal Medicine*, 163(5), 585-591.
- <sup>40</sup> Wong, F., & Chung, L. (2005). Establishing a definition for a nurse-led clinic: Structure, process and outcome. *Journal of Advanced Nursing*, 53(3), 358-369.

- 
- <sup>41</sup> Chan, M., Yee, A., Leung, E. & Day, M. (2006). The effectiveness of a diabetes nurse clinic in treating older patients with type 2 diabetes for their glycaemic control. *Journal of Clinical Nursing*, 15, 770-781.
- <sup>42</sup> Denver, E., Barnard, M., Woolfson, R. & Earle, K. (2003). Management of uncontrolled hypertension in a nurse-led clinic compared with conventional care for patients with type 2 diabetes. *Diabetes Care*, 26(8), 2256-2260.
- <sup>43</sup> Evans, R., Barer, M., & Marmor, T. (1994). *Why Are Some People Healthy and Others Not?: The Determinants of Health of Populations*. New York: A. de Gruyter.
- <sup>44</sup> Kawachi, I., Kennedy, B., & Wilkinson, R. (1999). *The Society and Population Health Reader: Volume 1 Income Inequality and Health*. New York: The New Press.
- <sup>45</sup> Berkman, L., & Kawachi, I. (2000). *Social Epidemiology*. New York: Oxford University Press.
- <sup>46</sup> Wilkinson, R. & Marmot, M. (2003). *Social Determinants of Health: The Solid Facts*. Copenhagen: WHO Regional Office for Europe.
- <sup>47</sup> Canadian Population Health Initiative. (2005). *Improving the Health of Canadians*. Ottawa: Canadian Institute for Health Information.
- <sup>48</sup> Heymann, J., Hertzman, C., Barer, M., & Evans, R. (2006). *Healthier Societies: From Analysis to Action*. New York: Oxford University Press.
- <sup>49</sup> Raphael, D. (Ed.) (2009). *Social Determinants of Health: Canadian Perspectives*. Toronto: Canadian Scholars' Press, Inc.
- <sup>50</sup> Prüss-Üstün, A. & Corvalán, C. (2006), *Preventing disease through healthy environments: Towards an estimate of the environmental burden of disease*, Geneva: World Health Organization, 9.
- <sup>51</sup> Ibid, 78.
- <sup>52</sup> Ibid, 9.
- <sup>53</sup> Ibid, 76.
- <sup>54</sup> Ontario Medical Association. (June 2008). *Ontario's Doctors: Thousands of Premature Deaths due to Smog*. Toronto: Author. Retrieved April 16, 2009 from <http://www.oma.org/Media/news/pr080606a.asp>.
- <sup>55</sup> Particles (PM<sub>2.5</sub> and PM<sub>10</sub>), ozone (O<sub>3</sub>), sulphur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>) and carbon monoxide (CO). Ontario Medical Association. (June 2005). *The Illness Costs of Air Pollution*. Toronto: Author, 2. Retrieved November 18, 2009 from [https://www.oma.org/Health/smog/report/ICAP2005\\_Report.pdf](https://www.oma.org/Health/smog/report/ICAP2005_Report.pdf).
- <sup>56</sup> Finkelstein, M. M., Jerrett, M., & Sears, M. R. (2005), Environmental inequality and circulatory disease mortality, *Journal of Epidemiology and Community Health*, 59: 481-487. Concludes that some of the social gradient in circulatory mortality is due to environmental exposure to background and traffic pollution.
- <sup>57</sup> Finkelstein, M. M., Jerrett, M., DeLuca, P., Finkelstein, N., Verma, D.K. & Sears, M. R. (2003), Relation between income, air pollution and mortality: a cohort study, *Canadian Medical Association Journal*, 169(5):397-402.
- <sup>58</sup> Smargiassi, A., Berrada, K., Fortier, I. & Kowalski, T. (2006), Traffic intensity, dwelling value, and hospital admissions for respiratory disease among the elderly in Montreal (Canada): a case-control analysis, *Journal of Epidemiology and Community Health*, June, 60(6):507-12.
- <sup>59</sup> Cruickshank, K. & Boucher, N. (2004), Blighted Areas And Obnoxious Industries: Constructing Environmental Inequality On An Industrial Waterfront, Hamilton, Ontario, 1890–1960, *Environmental History*, and 9(3): 464-496.
- <sup>60</sup> Martins, M., Fustigate, F., Despoil, T., Martins, L., Pereira, L., Martins, M., Saliva, P. & Brag, A. (2004), Influence of socioeconomic conditions on air pollution adverse health effects in elderly people: An analysis of six regions in Sao Paulo, Brazil, *Journal of Epidemiology and Community Health*, 58(1):41-6.
- <sup>61</sup> Some research on environmental inequality is referenced at [http://www.scorecard.org/env-releases/def/ej\\_evidence.html](http://www.scorecard.org/env-releases/def/ej_evidence.html) (accessed November 18, 2009).
- <sup>62</sup> Dorn, S. (2008). *Uninsured and Dying Because of It: Updating the Institute of Medicine Analysis on the Impact of Uninsurance on Mortality*. Washington: Urban Institute, 2.

- 
- <sup>63</sup> Gupta, S. (2008). It can happen to you. CNN. Retrieved on November 18, 2009 from <http://www.cnn.com/HEALTH/blogs/paging.dr.gupta/2008/01/it-can-happen-to-you.html>.
- <sup>64</sup> Himmelstein, D., Warren, E., Throne, D., & Woolhandler, S. (2005), Illness and Injury as Contributors to Bankruptcy. Health Affairs Web Exclusive W5, 63. Retrieved on November 18, 2009 from [http://www.pnhp.org/PDF\\_files/MedicalBankruptcy.pdf](http://www.pnhp.org/PDF_files/MedicalBankruptcy.pdf).
- <sup>65</sup> Woolhandler, S., Campbell, T., & Himmelstein, D.U. (2003), Cost of Health Care Administration in the United States and Canada, New England Journal of Medicine, 349, 768-75.
- <sup>66</sup> Himmelstein, D., & Woolhandler, S. (2008). Privatization in a publicly funded health care system: the U.S. experience. International Journal of Health Services. 38 (3), 409.
- <sup>67</sup> Himmelstein & Woolhandler. (2008), 410-412.
- <sup>68</sup> Himmelstein & Woolhandler. (2008), 415.
- <sup>69</sup> Himmelstein, D. U., et al. (1999). Quality of Care in Investor-Owned vs. Not-for-Profit HMOs. Journal of the American Medical Association, 282(2), 159-163.
- <sup>70</sup> Garg, P. P., et al. (1999). Effect of the Ownership of Dialysis Facilities on Patients' Survival and Referral for Transplantation. New England Journal of Medicine, 341(2), 1653-60.
- <sup>71</sup> Rosenau, P. V., & Linder, S. H. (2003). A comparison of the performance of for-profit and nonprofit health provider performance in the United States. Psychiatric Services, (54)2,183-187.
- <sup>72</sup> Rosenau, P. V., & Linder, S.H. (2003). Two decades of research comparing for-profit health provider performance in the United States. Social Science Quarterly, 84(2), 219-241.
- <sup>73</sup> Schneider, E. C., Zaslavsky, A. M., & Epstein, A. M. (2005). Quality of care in for-profit and not-for-profit health plans enrolling Medicare beneficiaries. American Journal of Medicine, 118, 1392-1400.
- <sup>74</sup> Devereaux, P. J., et al. (2002). A systematic review and meta-analysis of studies comparing mortality rates of private for-profit and private not-for-profit hospitals. Canadian Medical Association Journal, 166(11), 1399-1406.
- <sup>75</sup> Devereaux, P. J., et al. (2002). Comparison of mortality between private for-profit and private not-for-profit hemodialysis centers: A systematic review and meta-analysis. Journal of the American Medical Association, 288(19), 2449-2457.
- <sup>76</sup> Devereaux, P. J., et al. (2002). Comparison of mortality between private for-profit and private not-for-profit hemodialysis centers: A systematic review and meta-analysis. Journal of the American Medical Association, 288(19), 2449-2457.
- <sup>77</sup> Devereaux, P. J., Heels-Andell, D., Lacchetti, C., Haines, T., Burns, K. E. A., Cook, D. J., et al. (2004). Payments for care at private for-profit and private not-for-profit hospitals: a systematic review and meta-analysis. Canadian Medical Association Journal, 170 (12), 1817-24.
- <sup>78</sup> The study was based on evidence from British Columbia. McGregor, M. J., Cohen, M., McGrail, K., Broemeling, A. M., Adler, R. N., Schulzer, M., et al. (2005). Staffing levels in not-for-profit and for-profit long-term care facilities: Does type of ownership matter? Canadian Medical Association Journal, 172, 645-649.
- <sup>79</sup> This study is based on evidence from Manitoba. Shapiro, E., and Tate, R. B. (1995). Monitoring the outcomes of quality of care in nursing homes using administrative data. Canadian Journal of Aging, 14, 755-768.
- <sup>80</sup> McGregor, M. J., Tate, R. B., McGrail, K. M., et al. (2006). Care outcomes in long-term care facilities in British Columbia, Canada: Does ownership matter? Medical Care, 44, 929-935.
- <sup>81</sup> McGrail, K. M., McGregor, M. J., Cohen, M., Tate, R. B., & Ronald, L. A. (2007). For-profit versus not-for-profit delivery of long-term care. Canadian Medical Association Journal, 176, 57-58.
- <sup>82</sup> Hillmer, M. P., Wodchis, W. P., Gill, S. S., Anderson, G. M., & Rochon, P. A. (2005). Nursing home profit status and quality of care: Is there any evidence of an association? Medical Care Research and Review, 62 (2), 139-166.
- <sup>83</sup> Deber, Raisa (2004). Cats and Categories: Public and Private in Canadian Health Care. HealthcarePapers, 4(4), 51-60.

- 
- <sup>84</sup> Ontario Health Coalition (2008), Review and Analysis of Ontario Auditor General's Report on the Brampton Civic Hospital P3. Toronto: Author. Retrieved November 18, 2009 from <http://www.web.net/ohc/bramptonp3anlys.pdf>.
- <sup>85</sup> Office of the Auditor General of Ontario, (2008) Brampton Civic Hospital Public-Private Partnership Project. Annual Report 2008, 104.
- <sup>86</sup> Pollock, A. M., Shaoul, J., & Vickers, N. (2002). Private finance and "value for money" in NHS hospitals: a policy in search of a rationale? *British Medical Journal*, 324, 1205-1209.
- <sup>87</sup> Pollock, A. M., Player, S., & Godden, S. (2001). How private finance is moving primary care into corporate ownership. *British Medical Journal*, 322, 960-963.
- <sup>88</sup> Gaffney, D., Pollock, A. M., Price, D., & Shaoul, J. (1999). A four-part series called The Private Finance Initiative: NHS capital expenditure and the private finance initiative – expansion or contraction? *British Medical Journal*, 319, 48-51.
- <sup>89</sup> Auerbach, L., Donner, A., Peters, D., Townson, M., & Yalnizyan, A. (2003). *Funding Hospital Infrastructure: Why P3s Don't Work, and What Will*. Ottawa: Canadian Centre for Policy Alternatives.
- <sup>90</sup> Report of the Auditor General. (1998). New Brunswick: Author.
- <sup>91</sup> Huebl, S. (September 2007). "Hospital Tab Battle Continues" *Sarnia Observer* September 8, 2007, p.A1.
- <sup>92</sup> Ontario Health Coalition. (2008). *When Public Relations Trump Public Accountability: The Evolution of Cost Overruns, Service Cuts and Cover Up in the Brampton Hospital P3.*, Author.
- <sup>93</sup> Walkom, T. (2008). Brampton case shows P3s work – just not for the public. *Toronto Star*, January 10<sup>th</sup>, 2008.
- <sup>94</sup> Ministry of Health and Long-Term Care Primary Health Care Team, Underserved Area Program. (2008). *Tuition Support Program for Nurses Guidelines*. June. Retrieved November 18, 2009 from [http://www.health.gov.on.ca/english/providers/ministry/recruit/tuition\\_doc/prog\\_guidelines.pdf](http://www.health.gov.on.ca/english/providers/ministry/recruit/tuition_doc/prog_guidelines.pdf)
- <sup>95</sup> Canadian Nurse Practitioner Initiative. (2005). *Overview of the Canadian Nurse Practitioner Initiative*. Ottawa: Author.
- <sup>96</sup> Wong, F.K.Y. & Chung, L.C.Y. (2005). Establishing a definition for a nurse-led clinic: Structure, process, and outcome. *Journal of Advanced Nursing*, 53(3), 358-369
- <sup>97</sup> Gilmour, H. & Park, J. (2003). *Dependency, chronic conditions and pain in seniors*. Supplement to Health Reports, Ottawa: Statistics Canada, 16, 21-31.