



CANADIAN NURSES ASSOCIATION
ASSOCIATION DES INFIRMIÈRES ET INFIRMIERS DU CANADA

The Health Infrastructure Advantage: Strengthening the Health System and Canada's Economy

**Brief to the House of Commons
Standing Committee on Finance**

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EXECUTIVE SUMMARY

Economic activity in the health sector contributes 10 per cent of Canada's gross domestic product, and the health sector employs 10 per cent of Canadian workers. Through their everyday interactions with Canadians, Canada's 252,000 working registered nurses make a significant contribution to the health, productivity and economic prosperity of our nation. Canadian nurses are prepared to continue their support for and participation in the federal government's plan to put Canada in a position of advantage. However, if nurses are to meet the prime minister's challenge to support the Advantage Canada initiative and make this country stronger, safer and better, we need the sustained partnership and support of the federal government to strengthen our health system.

Rapid development of new knowledge and new technologies, an aging population and workforce, and labour force shortages all point to the critical need for infrastructure that supports science and innovation, information and communications technology, and health human resources.

CNA recommends that the federal government invest \$1.1 billion over 5 years in health infrastructure to strengthen the health system and Canada's economy. This investment in the health of Canadians includes:

- \$79 million to advance health through nursing science and innovation;
- a 100 per cent rebate of the Goods and Services Tax charged on information and communications technology purchases, estimated at \$20 million; and
- \$1 billion to build and strengthen Canada's health human resources infrastructure.

The Canadian Nurses Association (CNA) is the national professional voice of registered nurses, supporting them in their practice and advocating for healthy public policy and a quality, publicly funded, not-for-profit health system. CNA is a federation of 11 provincial and territorial nursing associations and colleges representing more than 133,700 registered nurses and nurse practitioners.

Canada's 252,000 working registered nurses have more face time with Canadian citizens than any other health-care provider. As CNA marks its 100th anniversary in 2008, we are celebrating the tremendous contribution that nursing and health care add to the productivity and economic prosperity of our nation. As the Canadian Healthcare Association has pointed out, "Canada's publicly-funded health system provides a significant competitive advantage to Canadian business due to reduced health benefit costs for Canadian employers. For the auto industry, a sector that generates billions of dollars for the Canadian economy, this advantage amounts to about \$4.00 per hour per worker."¹ Canadian health services provide the Canadian auto sector with a competitive advantage over that of the U.S. They also help make Canada a country of choice for investment.²

Economic activity in the health sector contributes 10 per cent of Canada's gross domestic product, and the health sector employs 10 per cent of Canadian workers. CNA strongly supports the federal health minister's promise that "to live up to the commitment of the patient wait times guarantee, the government will make some fundamental changes in our health care system, changes based on four key cornerstones: research, technology, improved collaboration between jurisdictions, and health human resources...I will actively work with our partners in provincial and territorial governments, as well as with stakeholders, to make sure that Canada has the most effective supply and distribution of people to fill the many roles that our health system requires to meet the needs of Canadians."³

Canadian nurses are eager to continue their support for and participation in the federal government's plan to improve Canada's position of advantage. However, the sustained support of the federal government is necessary if nurses are to meet the prime minister's challenge to make the country's health system stronger, safer and better. CNA recommends a \$1.1 billion investment in health infrastructure to strengthen the health system, the

overall health of Canadians and, ultimately, the economy. **This level of investment in health system infrastructure would address three areas that are key to improving health care and health status.**

SCIENCE AND INNOVATION

Canadian nursing entered the 1900s in an apprenticeship model of training, with its practice driven by the places where nurses were employed, and often by the needs and expectations of individual physicians. One hundred years on, Canadian nursing is a self-regulated, university-based, professional discipline whose practice is grounded in a solid foundation of science. That timeline is somewhat deceiving, however, because the vast bulk of scientific progress in nursing has taken place since just 1980 – and many signs of its growth were not visible outside the nursing profession until the 1990s.

Federal investments in nursing science date from 1979, when Health Canada supported the first nursing research centre in Canada. The most significant federal investment came in 1999, with the government's \$25 million Nursing Research Fund. That investment has significantly enhanced the generation of new knowledge and innovation. For example:

- There are 15 doctoral programs in nursing in 2008 where there was none in 1990. Just 12 nurses graduated from doctoral programs in nursing between 1990 and 1997; 39 graduated in 2006 alone.
- The Canadian Nurses Foundation provided more than \$2.2 million from the Nursing Research Fund to 160 nursing care research projects between 2003 and 2007 and leveraged an additional \$4.7 million from partners – a tripling of the federal government's investment.

The innovation resulting from that increased research capacity is paying off. For example, on the basis of their study findings, a nurse-led research team that compared the efficacy, cost and time required for visits to nursing clinics versus home visits through community care access centres estimated that 10 per cent of all Canadians could be treated with greater efficacy, in less time and for less cost at nursing clinics. Making such a system change would free up the equivalent of 146 full-time registered nurses who could be allocated to other places in the system experiencing shortages and access challenges – and at the same time realize a savings of \$10 million in lower-cost visits.⁴

The Nursing Research Fund will end in 2009, just as the research it has generated is beginning to transform the health system. There is an urgent need to (1) recruit, support and graduate a consistent number of new nurse scientist candidates; (2) groom the skills of a new generation of thinkers ready to lead Canadian health system innovation; and (3) sustain a national network of scientists equipped to conduct national-level studies that produce solutions to health and health-care challenges.

CNA, along with other members of the Canadian Consortium for Nursing Research and Innovation, propose a new 10-year federal program to meet those goals and enhance nursing's contribution to health system innovation. *Advancing Health through Nursing Science* is a comprehensive program designed to create a "people advantage" through a roster of Pathways to Careers in Nursing Science and a "knowledge advantage" by putting in place a range of Pathways to Nursing Knowledge. **A total investment by the federal government of \$79 million – less than 25 cents per citizen for each of the next 10 years – will result in significant innovation and represent an important down payment on the health and productivity of Canadians.**

INFORMATION AND COMMUNICATIONS TECHNOLOGY IN THE HEALTH SECTOR

Information and communications technology (ICT) offers solutions to ease the problem of access to health services. It can streamline processes so that Canadians have more timely access to health care. As the CEO of one health region observed, the health sector is in the information management business. ICT investment is needed to accelerate implementation of information technology in the health sector: the health sector is still 25 to 30 years behind other sectors in terms of incorporating ICT.

ICT will revolutionize how the health sector does business, just as it has for the airline and banking sectors. Applications like telehealth enable service provision 24/7 to every urban, rural and remote location throughout Canada. ICT facilitates access by Canadians to seamless health services. And ICT implementation will bring the Canadian health sector fully into the 21st century and help make the health system competitive, efficient and effective.

The benefits of applying ICT to the health sector are numerous. It can provide patients with the information they need to navigate the health system and make choices about the care they receive. ICT makes communication with patients and their families faster and more accurate, resulting in shorter wait times and importantly, fewer errors. And it gives health-care providers access to the results of tests and procedures so that assessments, examinations and treatments are not repeated. All of these outcomes mean quicker access to better care.

International and domestic experiences with the introduction of ICT in health care show that there are efficiencies to be gained. The proceedings from a 2006 conference on electronic health records sponsored by Canada Health Infoway and the Health Council of Canada⁵ state that:

- E-prescribing in Denmark has cut the rate of medication error from 33 per cent to 14 per cent.
- Electronic records in intensive care have reduced mortality rates by up to 68 per cent.
- Telehealth services have reduced visits to emergency departments by 34 to 40 per cent.

A 2005 study by Booz Allen Hamilton points to a potential savings in Canada of \$6 billion per year with the full adoption of ICT in the health sector.⁶

Through Canada Health Infoway, the federal government is collaborating with the provinces and territories to fund implementation of the basic elements of ICT use, including drug prescriptions, lab tests and diagnostic imaging. This effort focuses on hospitals and other acute care settings. Home care nurses, community health centres, family physicians and other providers outside of hospitals are not connected.

There is an opportunity – and a need – to complement the federal government’s interest in addressing mental health diseases and particular chronic diseases like cancer, heart disease and diabetes. Care of these diseases happens largely outside hospitals. To obtain the full benefits of proactive disease management and reduce wait times for health services related to chronic disease, community-based health providers must become connected. Through the tax system, the federal government can create a business environment that encourages a broader range of health organizations to invest in ICT.

Community health nurses were on the front lines delivering care during the 2003 SARS epidemic. The experience showed the importance of sharing real-time information about appropriate health services for managing the disease and controlling its spread to aid providers who were caring for and supporting patients in their homes and in community clinics. The SARS experience also identified the absence of communication processes that would allow providers to inform pandemic surveillance and decision-making by government public health agencies. To improve access to effective health services in the community, ICT infrastructure is needed in the community at the point of care. This means a combination of laptop computers, wireless handheld e-mail and Internet devices, personal digital assistants and cellular phones. To promote the purchase of these ICT tools, **CNA recommends that corporations investing in ICT for the health system receive a 100 per cent rebate of the Goods and Services Tax (GST) charged on ICT purchases.**

Take the example of home care nurses at the Victorian Order of Nurses (VON) Canada. Through a network of branches across Canada, VON nurses make millions of community health-care visits in 1,300 communities every year. Better access to health services would result if VON nurses were using a laptop (retail \$1,000 or less) to access test results and clinical guidelines, and a cellphone (retail \$100) to consult with a clinical nurse specialist. To have their 1,650 nurses connected using laptops and cellphones, VON would need to invest \$1.8 million. A full GST rebate for this investment would amount to \$90,750, or \$55 per VON nurse.

As well, health sciences education programs are increasingly using ICT to make education more accessible to Canadians, for example with distance education programs and simulation laboratories. By the 2006-2007

school year, 37 out of 131 baccalaureate nursing programs were offered electronically, in full or in part.⁷ To facilitate enrolment in world-class nursing education, **CNA recommends the 100 per cent GST rebate on ICT investment for health sciences education programs.**

HEALTH HUMAN RESOURCES INFRASTRUCTURE

Canada faces growing labour shortages across most health disciplines at a time when strong growth is predicted for employment in the health sector.⁸ Two other trends signal the critical importance of investing in the knowledge, skills and workplace supports for Canada's health-care workers.⁹ First, baby boomers are overrepresented in the health workforce. For example, for every two registered nurses in Canada who are 50 years of age or older, there is only one registered nurse 35 or younger.¹⁰ A new generation of registered nurses is not being produced to adequately replace retiring staff. Second, technological innovations are bringing constant change and new skill requirements, which means that providers must be able to access continuous opportunities for workplace learning. Underinvestment in the current health human resources (HHR) infrastructure risks underperformance in the immediate future.

In the past decade there has been increasing concern that Canada is not producing enough health-care providers to meet the growing demand for health services. Policy challenges related to HHR have been identified in seminal reports released by the Royal Commission on the Future of Health Care in Canada, the Standing Senate Committee on Social Affairs, Science and Technology, and the Health Council of Canada.¹¹ Not only are a growing number of health-care providers planning to retire from or simply leave the health system over the next decade, but a growing number of aging, well-informed, tech-savvy Canadians will be turning to the health system for ever more information, diagnosis and treatment.¹²

Graduating more professionals is a necessary strategy for addressing these growing demands, but on its own it is insufficient. The rapid growth of knowledge and new technology demands lifelong learning for new and existing health-care providers. Statistics Canada reported that in 2002, 60 per cent of adults in health occupations participated in formal job-related training, twice the rate of other occupations.¹³ That dynamic will only grow as we move forward, and it will be accompanied by modern and evolving roles for nurses, physicians and other health-care providers.¹⁴

CNA agrees with fellow members of the Health Action Lobby (HEAL) that a “giant step up is required in the human and physical infrastructure needed to train health professionals if Canadians are to have timely access to care.”¹⁵ Therefore, **CNA recommends that the federal government invest in the creation of a National Health Human Resource Infrastructure Fund that would be in existence for five years and valued at \$1 billion.**

The HEAL proposal for this fund states that “funding would be made available to the provinces on an equal, per capita basis. Funding applications would be reviewed and approved through a federal/provincial/territorial mechanism that is acceptable to the provinces, and also provides a process to consult with and engage health stakeholders...The funding would cover the three essential and symbiotic elements that are required to train and develop additional health providers and leaders:

1. The direct costs of training providers and developing leaders (e.g., cost of recruiting and supporting more community-based teachers/preceptors)
2. The indirect or infrastructure costs associated with the educational enterprise (e.g., physical plant, housekeeping, maintenance); support for departments (e.g. information systems, library resources, occupational health, etc.); education offices, and the materials and equipment necessary for clinical practice and practical training.
3. Resources that improve the country's overall data management capacity, and in particular, facilitate the ability to model and forecast health human resources requirements in the face of the changing demand for health services.”¹⁶

CONCLUSION

Underinvestment in health sector infrastructure will risk poor performance not only in the health system but also in the national economy more widely. Registered nurses will continue to help to maintain the “Canada advantage” by making Canada stronger, safer and better through the assurance of high-quality health care. However, we need the sustained support of the federal government to achieve the people advantage and the knowledge advantage that underpin a strong health system. Strengthening the health system and Canada’s economy requires a **\$1.1 billion investment over 5 years in health infrastructure** supporting nursing science and innovation, the wide application of information and communications technology, and a robust and flexible health workforce.

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 - ¹⁶ Ibid.