

SEEING THE FUTURE OF INNOVATIVE HEALTHCARE IN CANADA THROUGH RADIOLOGY



PRESENTED ON BEHALF OF
THE CANADIAN ASSOCIATION OF RADIOLOGISTS
BY WILLIAM MILLER MD, FRCPC

AUGUST 5, 2016



Canadian Association of Radiologists
L'Association canadienne des radiologistes

ABOUT THE CANADIAN ASSOCIATION OF RADIOLOGISTS

The Canadian Association of Radiologists (CAR) is the national specialty society for radiologists in Canada. We represent 2225 members who provide vital medical imaging for millions of patients. We are dedicated to maintaining the highest standards of care, promoting patient safety and helping radiologists contribute to the very best health care for patients. We work with governments, health professionals and technology leaders to make optimal use of diagnostic imaging.

TABLE OF CONTENTS

Executive Summary	4
Introduction	4
Issues	
Enhance Access and Quality of Care While Demonstrating Value	5
Close the Gap on Diagnostic Imaging.....	5
Ensure Access to Medical Care via Group Medical Structures	6
Conclusion	7
References	7

EXECUTIVE SUMMARY

To address the pressures facing the healthcare system, to ensure quality access to care for patients and to allow Canada to lead on the innovative use of applied technology, the CAR recommends:

1. Investing \$65 million over 5 years to demonstrate and deploy the technology services necessary to introduce a national **Clinical Decision Support** network for medical imaging
2. Investing \$600 million over 5 years to ensure that **diagnostic imaging equipment** meets the needs of Canadian patients and matches international standards
3. Maintaining the small business tax deduction exemption for **group medical practices** to ensure continuity of access to care, quality teaching and cutting-edge research capacity

INTRODUCTION

The CAR is pleased to provide this submission to the House of Commons Standing Committee on Finance as part of its pre-budget consultation process. In submitting these recommendations, the CAR wishes to highlight the mandates issued by the Prime Minister to the Ministries of Health, Finance, and Innovation, Science and Economic Development. The mandate for the federal Minister of Health calls for the involvement of provinces and territories in developing a new **multi-year Health Accord**. The CAR supports this development and encourages particular investment in pan-Canadian **collaboration on health innovation** to encourage the adoption of new digital health technology.

Although Canada may be considered a leader in healthcare innovation, evidence shows that we are lagging. Canadian healthcare spending per capita is higher than a number of nations that have equal or better performance across a range of healthcare measures.ⁱ A 2014 international study of health outcomes juxtaposed with system-wide spending **ranked Canada 10th out of 11 nations**; only the United States fared more poorly.ⁱⁱ There are concerns about access, fiscal challenges, and the question of how best to ensure quality of care for all Canadians. Furthermore, maintaining efficiency and value on a system-wide basis puts more pressure on the government and providers.

Radiologists are at the centre of the healthcare hub, contributing to the diagnosis and treatment of innumerable conditions. Moreover, radiology is at the forefront of **dramatic advances in medical**

technology, and has a bird's-eye view of how emerging resources can be used to holistically manage patient care. Radiology adds value to the healthcare system by reducing downstream treatment costs for progressive disease, by making use of technology to improve access for underserved communities, and by contributing to overall system efficiency related to appropriateness of tests and treatment.ⁱⁱⁱ

The 2015 findings of the Advisory Panel on Healthcare Innovation,^{iv} supported by the related e-brief released by the C.D. Howe Institute, have guided the CAR in preparing this submission.^v Ultimately, the CAR supports the Government in its effort to take the lead on improving and enhancing the healthcare system. Some of the recommendations that follow suggest that the Government adopt the spirit of the C.D. Howe Institute's directive to consider undertaking independent federal projects. The existing parameters for federal involvement in health care delivery and systems improvement are insufficient to meet the needs of Canadian patients in the current economic climate.

The Government posed questions prior to these consultations about what projects would stimulate economic growth and meet local priorities, many of which emphasized the role of innovation in driving that growth and prosperity. If implemented, the CAR's recommendations encourage investment in **infrastructure projects with a national scope and a local impact** for patient communities from across Canada. These will leverage emerging technologies and encourage even greater innovation and entrepreneurship to make health system improvements.

ISSUE: ENHANCE ACCESS AND QUALITY OF CARE WHILE DEMONSTRATING VALUE - CLINICAL DECISION SUPPORT

Canada has a reputation as a leader in medical imaging technology, but new modalities have not been implemented to their fullest capacity due to structural barriers and a prevailing risk-aversion on the part of health policymakers.^{vi} Technology-driven improvements have often been constrained to particular regions or demonstration projects. To fully realize the potential of medical imaging, to improve patient access to care and to drive long-term cost savings, this must change. Investments in technology solutions that leverage prior electronic health record successes and integrate into clinical workflows and point of care systems help ordering clinicians make optimal decisions for their patients. Clinical decision support also facilitates harmonization of imaging orders from jurisdiction to jurisdiction, and alleviates some of the stress on the health system. This project exemplifies pan-Canadian infrastructure that will drive economic growth and create opportunities for additional avenues of inquiry and entrepreneurial innovation. **Implementing clinical decision support for medical imaging** can ensure appropriateness, and value for patients and providers.

Canada Health Infoway is committed to working with the CAR to integrate clinical decision support tools into clinical workflows to improve access, appropriateness and efficiency.

—Terry Moore, Acting VP, Business Development, Canada Health Infoway

The CAR, working closely with Canada Health Infoway and other national partners, can provide clinical insight and oversight that will inform decision support for medical imaging. The service will implement CAR clinical decision guidelines to help ordering clinicians make the most appropriate decisions and avoid unnecessary testing. Over \$360M of Infoway funding has resulted in the deployment of Diagnostic Imaging Repositories (DI-Rs) across the country, this new decision support service could be integrated to DI-Rs to avoid duplicate exams and achieve cost savings while leveraging significant investments from Infoway,

provincial and territorial partners. Specific digital health funding for medical imaging will operationalize investments already made, permitting the entire system to work smarter, not harder. Over time, the system will create a feedback loop that can support **data analytics to improve the quality of radiology care and encourage system efficiencies**. Results achieved in similar projects suggests that after five years, up to 50% of community-based imaging orders could be run through the clinical decision support system, ensuring appropriateness, efficiency and quality of care for patients across the country.

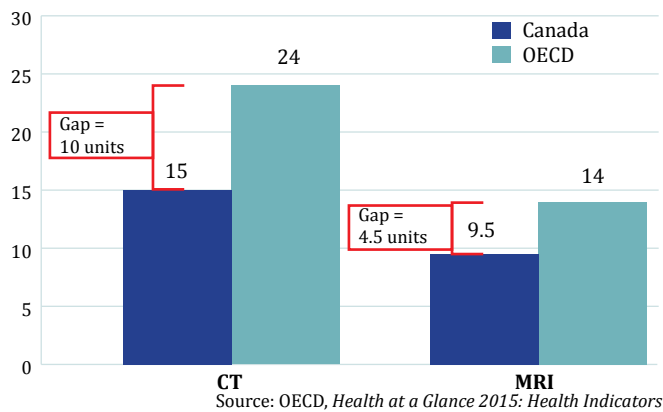
Recommendation: The CAR recommends investment of \$65 million over five years to demonstrate and deploy a national Clinical Decision Support Network to optimize medical imaging access and appropriateness.

ISSUE: CLOSE THE GAP ON DIAGNOSTIC IMAGING ACCESS IN CANADA - A NEW EQUIPMENT FUND

Improving access to quality equipment is one of the best ways to ensure efficient imaging services for patients. In 2015, 40% of Canadian primary care doctors reported that their patients experience difficulty getting specialized diagnostic imaging tests. This is nearly double the average of 21% in the developed world according to the Commonwealth Fund.^{vii} For MRI scans, the median wait time increased significantly in 4 of the 6 reporting provinces from 2011 to 2015. For CT scans, the median wait increased significantly in 2015 in 5 provinces.^{viii}

In spite of major strains on medical imaging capacity, demonstrated by the continuing wait times issue, radiology has not received significant capital investment from the federal government since the 2004 Health Accord. In 2004, the Government invested \$2.5 billion over 5 years in the *Diagnostic and Medical Equipment Fund*, which was dispersed to provinces and territories on a per capita basis to support the purchase of equipment.^{ix} However, compared with other countries of varying levels of development around the world, as recorded by the OECD, Canada currently appears in the **lower 50% in terms of number of CT**

DIAGNOSTIC IMAGING UNITS, CANADA VS. OECD PER MILLION POPULATION



and MRI units per million people.^x Additionally, a lack of access to PET scanners means that patients who are candidates for imaging via this modality are being denied care that would improve outcomes and save lives.^{xi} Over time, the usefulness and safety of medical imaging equipment declines. Based on lifecycle guidelines developed by the CAR and supported by CADTH, it is clear that Canada is facing a period where significant investment will be necessary to ensure that patients receive the services they need.^{xii}

CAR consultations with industry leaders have emphasized that fiscal pressures and the desire for quality has increasingly led hospitals and other institutions to invest strategically in equipment that will bring the greatest benefit to patients over time. Upgraded and replacement equipment must have the capacity to fully integrate with data management systems already in place, and then interface with emerging technologies to capture and collect valuable data. This data can then be used to make more accurate clinical decisions that facilitate improvements across the healthcare system. Here, the interplay between investment in digital infrastructure and physical equipment is clear. **Renewed attention to the capital needs of the health system will have cascading benefits for all patients.** Investing in imaging equipment replacements and upgrades will improve quality of care and access to it.

THE CAR'S FIVE YEAR INVESTMENT RECOMMENDATIONS

	2017	2018	2019	2020	2021	Total
Clinical Decision Support	\$10 million	\$10 million	\$15 million	\$15 million	\$15 million	\$65 million
Diagnostic Imaging Equipment	\$75 million	\$75 million	\$100 million	\$150 million	\$200 million	\$600 million

Recommendation: Investment of \$600 million over five years to ensure that diagnostic imaging meets the needs of Canadian patients and matches international standards.

ISSUE: ENSURE ACCESS TO MEDICAL CARE VIA GROUP MEDICAL STRUCTURES

Access to quality radiology services for our patients is our foremost concern. Group practice is the most practical means of managing the effective delivery of comprehensive imaging services. Most radiologists in Canada work in such collaborative teams. These practice models are a way to provide a broad spectrum of radiology coverage and expertise, to cover call responsibilities, and to share limited resources. Radiological services include complex imaging across multiple body systems and modalities. The provision of these services is extremely important to the communities they serve.

The federal budget tabled in March 2016 recognized the value that physicians and other healthcare professionals deliver to communities across Canada as small business operators. However, the budget also introduced a proposal to alter eligibility to the small business deduction that will impact physicians incorporated in small business structures. These structures permit increased patient access to care, and allow for the development of robust teaching and research capacities. The CAR stands united with the Canadian Medical Association in requesting that the Government amend the budget implementation act to ensure that group medical structures and healthcare delivery are not impacted.

Ultimately, radiologists working in group structures understand local needs, and have the ability to hire and manage the right mix of general and subspecialty-trained radiologists to provide comprehensive services.

To deliver such broad-spectrum service seamlessly, radiologists work cooperatively, and share the delivery of care. Group structures allow all this to happen; the proposed federal tax change would seriously disrupt this mode of practice. As radiologists exist at the intersection of innumerable branches of medicine and patient care pathways, the disruption will have downstream effects for other aspects of patient care.

Recommendation: Maintain the small business tax deduction exemption for group medical practices to ensure continuity of access to care, quality teaching and cutting-edge research capacity.

CONCLUSION

The CAR supports the Government in its effort to drive innovation and performance across the healthcare system. Nearly 150 years ago, the Canadian government invested in the Canadian Pacific Railway, a modern infrastructure project that contributed to the development of the country from coast to coast. On the eve of Canada's sesquicentennial, the CAR urges the federal government to consider innovative investments in healthcare that will have an equally significant impact on the lives of Canadians.

REFERENCES

- i. Canadian Institute for Health Information (CIHI). National Health Expenditure Trends, 1975 to 2014. Ottawa: CIHI, 2014. Available from: http://www.cihi.ca/CIHI-ext-portal/pdf/internet/nhex_2014_report_en.
- ii. Karen Davis, Kristof Stremikis, David Squires, and Cathy Schoen. *Mirror, Mirror on the Wall: How the Performance of the U.S. Health Care System Compares Internationally*. New York: Commonwealth Fund, June 2014.
- iii. Findings from the Conference Board of Canada research project *The Value of Radiology in Canada*, August 2016.
- iv. Panel on Healthcare Innovation. *Unleashing Innovation: Excellent Healthcare for Canada*. Ottawa: Health Canada, July 2015. Available at: <http://www.healthycanadians.gc.ca/publications/health-system-systeme-sante/report-healthcare-innovation-rapport-soins/alt/report-healthcare-innovation-rapport-soins-eng.pdf>.
- v. Åke Blomqvist and Colin Busby. *The Naylor Report and Health Policy: Canada Needs a New Model*. Ottawa: C.D. Howe Institute, July 6 2016. Available at <https://www.cdhowe.org/public-policy-research/naylor-report-and-health-policy-canada-needs-new-model>.
- vi. Panel on Healthcare Innovation, 19; 44-45.
- vii. Canadian Institute for Health Information. *How Canada Compares: Results From The Commonwealth Fund 2015 International Health Policy Survey of Primary Care Physicians*. Ottawa, ON: CIHI, 2016.
- viii. Canadian Institute for Health Information. *Analysis in Brief: Wait Times for Priority Procedures in Canada, 2016*. Ottawa: CIHI, March 2016.
- ix. Panel on Health Care Innovation, 42.
- x. CADTH. *The Canadian Medical Imaging Inventory 2015*. Available at <https://www.cadth.ca/canadian-medical-imaging-inventory-2015>.
- xi. Susan D. Martinuk. *The Use of Positron Emission Tomography (PET) for Cancer Care Across Canada: Time for a National Strategy*. Vancouver: TRIUMPH-AAPS, 2011.
- xii. CADTH. *Diagnostic Imaging Equipment Replacement and Upgrade in Canada*. Ottawa: CADTH, March 2016. https://www.cadth.ca/sites/default/files/pdf/ES0303_DI_Equipment_Replacement_es_e.pdf. See also CAR. *Lifecycle Guidance for Medical Imaging Equipment in Canada 2013*. Ottawa: CAR, 2013. <http://www.car.ca/uploads/standards%20guidelines/car-lifecycleguidance-summary-e-20131127.pdf>.



600 – 294 Albert Street
Ottawa, Ontario K1P 6E6
Tel.: 613 860-3111
Fax: 613 860-3112
www.car.ca



Canadian Association of Radiologists
L'Association canadienne des radiologistes