**Innovation in medical imaging can keep health care affordable**

The technologies of our medical imaging innovators have strong potential to be part of the solution worldwide to the conundrum of the rising cost of health-care provision to an aging population with complex treatment needs, as well as in providing better patient care, with better overall health outcomes and quality of life.

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**As we age, the likelihood of acquiring chronic or potentially life-threatening conditions such as Alzheimer’s and heart disease or breast and prostate cancer increases, as does the chance that we will need access to specialized technology to detect, properly diagnose and treat our ailments. The number of seniors in Canada is increasing steadily. By 2051, about one in four Canadians is expected to be 65 or over.** This is part of an unprecedented demographic transition globally in which fewer babies are being born and life expectancy is increasing.

We are also seeing a rise in chronic and deadly diseases in emerging economies, along with an improving economy, of the world. Canada needs to find effective solutions to respond to the medical realities of the coming decades, while grappling with the economic implications.

Medical imaging technologies have become foundational to health care. Options such as ultrasound, magnetic resonance (MR), positron emission tomography (PET), computed tomography (CT), mammography, and digital pathology are being used to more accurately detect, diagnose and treat a range of medical conditions.

Although these devices have many uses for doctors, technicians, researchers and businesses, they are highly expensive to purchase and operate, calling into question their practicality and the wisdom of investing in potentially cost-inefficient equipment. Innovation in medical imaging, including advances that make medical imaging more accurate and efficient, is crucial.

Innovation in medical imaging technologies has the potential to enable this scenario. Advances in medical imaging have the potential to change how we use imaging to improve care for residents with complex treatment needs, as well as in providing better patient care, with better overall health outcomes and quality of life.

**Spreading innovation key to health-care sustainability**

Improving health care across Canada is no easy task. Growing rates of chronic diseases ranging from cardiovascular disease to diabetes and chronic obstructive pulmonary disease (COPD), an aging population and steadily rising costs are straining systems that were built for a different era. The question facing governments and the health-care sector is: How can we improve health care for Canadians while getting better value for the money we spend?

Fortunately, in every corner of the country dedicated physicians, nurses, researchers and managers are developing innovative ways of providing excellent patient care while bending the cost curve. However, too often these leading practices aren’t shared and implemented across regional, provincial and territorial boundaries for the benefit of all Canadians. We must move from isolated pockets of excellence to excellence for all.

At the Canadian Foundation for Healthcare Improvement (CFHI), we see innovation as an opportunity to leverage the best of what we have and what we can be to improve health-care outcomes and efficiency. CFHI’s approach to excellence for commercialization (CIMTEC) was created to capitalize on these investments by enabling and accelerating the translation of Canada’s important and world-leading medical imaging innovations into commercial products for clinical use.

Funded through the federal government’s Centre for Excellence in Commercialization and Research (CECR) program, CIMTEC’s overarching goal is to ensure that Canadian companies bring their medical imaging innovations to market so Canadians can reap the associated health and economic benefits.

The centre is helping strengthen the Canadian medical imaging industry by providing a range of programming to help commercialize imaging technologies, and to foster clinical testing services for startup companies that will create cost-saving devices with the potential to curb rising costs of the multi-billion dollar global medical imaging market and develop and attract highly qualified people to high-value jobs in this country.

New medical imaging technologies face a number of hurdles, arguably, the most arduous is gaining acceptance from those footing the bill. A device may advance through the challenging process of acquiring regulatory approval, but many decision makers are not willing to reimburse for the technology, it will simply lie fallow.

When many Injectors and others wonder about what new technologies to adopt, the provincial and public insurance groups must make tough decisions about how to allocate limited budgets most effectively.

Dr. Aaron Fenster, CIMTEC’s centre director, and director of imaging research laboratories at Robarts Research Institute at Western University, recently delivered a presentation at the United Nations about the future of medical imaging globally. Dr. Fenster says, “Reimbursement pressures are driving current trends in medical imaging technology.” Government and health-care institutions are primarily interested in adopting new technology that will increase their throughput, while decreasing their cost per patient.

Because of Canada’s strong investment in the sector, the technologies emerging from medical imaging innovators have strong potential to be part of the solution worldwide to the conundrum of the rising cost of health-care provision to an aging population with complex treatment needs, as well as in providing better patient care, with better overall health outcomes and quality of life.

Bart Sullivan is the CEO of the Centre for Imaging Technology Commercialization, a Centre of Excellence for Commercialization and Research, federally funded through the Networks of Centres of Excellence.

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