



***Submission for Pre-Budget Consultations for
the 2019 Budget
By: MEDEC***

August 2, 2018

MEDEC is the national association representing Canada's innovative medical technology (MedTech) industry. We represent over 100 MedTech companies (ranging from Canadian-owned to multinationals) and work closely with government and healthcare stakeholders to deliver a patient-centred, safe, accessible, innovative and sustainable universal healthcare system supported by the use of medical technology.

Recommendations

- **Recommendation 1:**

That the government take a leading role in designing and implementing policies to incent global medical technology companies to spend their R&D dollars in Canada - resulting in numerous economic spillover benefits, including employment.

- **Recommendation 2:**

That the government provide funding to help provincial & territorial healthcare systems invest in and adopt novel and innovative medical technologies that will lead to a globally competitive MedTech market in Canada and sustainable healthcare systems.

- **Recommendation 3:**

That the government take a leadership role in the adoption of a common national framework to measuring health outcomes resulting in greater efficiencies and lower costs.

- **Recommendation 4:**

That the government remove the regulatory barriers to build an innovation economy and provide funding to grow a Canadian Artificial Intelligence & Digital Health cluster that will be globally competitive.

- **Recommendation 5:**

That the government create preconditions for more Capital investment in Canada by MedTech companies by creating an Accelerated Capital Cost Allowance in the Federal tax code.

Recommendation 1: R&D

Our goal is to establish Canada as a global leader in medical technologies, with an economy that attracts significant Foreign Direct Investment (FDI) while spurring exports to promising global markets. This means that Canada should be in the Top 10 globally in attracting clinical trials (per capita), medical device exports (per capita) and R&D spend. This would result in hundreds of millions of dollars in new FDI and thousands of new jobs.

MedTech MNEs spend a significant amount of dollars globally on R&D. Total R&D spending by pure play U.S. and European MedTech companies rose 5% in 2016 to US\$27B.¹ Medical Device R&D investment in Canada from MNE's is currently below US\$100M (1.4% of revenues) which is well below the world average where investment in Medical Device R&D hovers around 7% of revenues.² This low level of investment can be tied to a Canadian landscape that has an outdated and fractured provincial procurement environment and a product approval regime that is both burdensome and lacks predictability, making it extremely challenging for industry to bring new and innovative technologies to market. Solving these systemic issues is instrumental to driving Canadian R&D investment to be on par globally.

An audacious vision for MedTech R&D spending would have Canada punching above its weight with investments in the **US\$500M - US\$750M range on an annual basis.**

MedTech MNE's have a stronger financial capacity to invest in innovation than home-grown SME's. The capacity of Canadian SME's to increase R&D spend is closely tied to their ability to generate revenue from both domestic and export sales. In 2016, Canada's GERD (Gross Domestic Expenditures on R&D)/GDP was at 1.6% as compared to the OECD average of 2.4%.³ To bring GERD/GDP up to the OECD average, Canada would need to spend \$10B more on R&D annually; of this, private industry would be asked to contribute roughly \$5B (51%). While MNE's can contribute strongly to this number, Canadian SME's will also need to commit their fair share of R&D dollars; this can only occur if SME's are able to generate increased domestic and export sales. MedTech-tailored government programs at both ISED and GAC are required to not only help SME's sell into the Canadian market, but also to increase their export revenues.

Given that the MedTech sector invested almost 7% of revenues in R&D globally, twice the average of industry in aggregate, a focus on MedTech will reap more significant rewards for the government vs. other sectors.

¹ Statista

² Statista

³ An Analysis of Budget 2018: Research, Innovation and Trade, Global Advantage Consulting Group Inc., March 2018

Recommendation 2: Adopt Innovative Technologies

Simply put, the market for MedTech in Canada is not nearly as attractive as markets in other jurisdictions; **we are not competitive globally**. This makes it difficult for Canadian subsidiaries of MNE's to advocate for Canada's share of investment in R&D spending and new product launches, and extremely challenging for our home-grown SME's who struggle to access global markets when they cannot point to their home market as an early adopter. If we can address unfavourable market conditions in Canada, the rapid life cycles of MedTech products gives industry the ability to make relatively nimble investment decisions in R&D and manufacturing.

MedTech companies will invest in jurisdictions where they can bring innovations to market quickly, and where those products will be adopted by the health system. Canada is not one of those jurisdictions. We are competing for global investments and there are jurisdictions globally (e.g. Germany, Belgium, Netherlands) where the government has acknowledged its role in enabling innovation adoption and have done an excellent job of coordinating fully aligned, state sponsored stakeholder strategies.

Canada should be a leading power in a host of life sciences activities from clinical trials to R&D and manufacturing. We've been held back however, by our reluctance to adopt the kind of demand-side policies that commit resources to pulling innovations into our healthcare system that we've already applied in priority areas like renewable energy. **If we're going to tap into that potential, then we need to collectively shift our mindset and begin to view healthcare as an economic driver rather than a cost center.** This is an opportunity to unleash our significant healthcare budgets to not only improve patient outcomes and increase system efficiencies, but to stimulate technological innovation. We should aspire to having a system that simultaneously improves patient outcomes, allows patients timely access and drives the economy.

MEDEC is advocating for a fund similar to that recommended by The Advisory Panel on Healthcare Innovation in their report *Unleashing Innovation: Excellent Healthcare for Canada*. The broad objectives of their Healthcare Innovation Fund were to effect sustainable and systemic changes in the delivery of health services to Canadians. The general goals were to: support high-impact initiatives proposed by governments and stakeholders, break down structural barriers to change, and accelerate the spread and scale-up of promising innovations. (APHI, Unleashing Innovation: Excellent Healthcare for Canada, July 2015)

Recommendation 3: Measure Health Outcomes

The lack of outcome measurements that represent what truly matters most to patients is a global barrier to driving healthcare improvement. As an example, the paucity of outcomes data beyond basic mortality measures results in a lack of information for patients and providers on whether what they do works. As a second example, where available, outcomes are hard to compare and not standardized resulting in a slow pace of change and inability to learn from others. Global, standardized, and transparent outcome measurement is essential to drive health care improvement (ICHOM, 2014).

The International Consortium on Health Outcomes Measurement (ICHOM) has developed a common framework for health outcomes measurement that allows health systems to compare how they are performing versus their peers and helps unlock the potential of value-based health care (VBHC). A lack of common standard for health outcomes measurement is certainly not unique to Canada, but the recent work by ICHOM is a big leap forward. Other countries, such as the Netherlands are already adopting such an approach.

From an economic perspective, this would encourage innovators to develop technologies and solutions that will provide the most meaningful benefits to patients. This would be particularly useful for small and medium sized enterprises as they could develop their technologies and better understand how they can create value propositions that can apply globally. Moreover, if the federal government (through CIHI) begins to collect outcomes in accordance with ICHOM standards, it could develop a globally envied framework and database that would harmonize outcomes measurement across all disease state across the entire country.

Finally, having a standardized approach to measuring health outcomes can help the health system create greater efficiencies since those in the system will better understand what value they are receiving from the scarce dollars they are spending. **Those savings could be re-invested into better health care, new innovations, or supporting a healthy and robust health economy – thus creating a virtuous cycle.** The savings generated would contribute to bending the healthcare cost curve and could potentially allow for lower Canada Health Transfer payments.

Recommendation 4: Grow AI/Digital Health Cluster

The benefits of clustering are well-known: increased productivity, more rapid innovation and new business formation. Clustering helps cities and countries direct their economic development and recruiting efforts. Strong domestic clusters also help attract foreign investment. (<http://www.referenceforbusiness.com/small/Bo-Co/Clusters.html>).

Highlighted below are specific segments where we anticipate a double-digit CAGR over the next several years and where there are already established foundational clusters:

- One area where advanced economies like Canada can have an advantage is in the **integration of diagnostics (laboratory medicine & pathology, imaging technologies) with guided imaging, robotics, and artificial/augmented intelligence.** This is reflected in the work currently being done in the existing clusters. A good example of this in Canada is Toronto-headquartered Synaptive Medical whose technology combines surgical planning and navigation, robotic automation, digital microscopy and informatics in a fully integrated platform. A report from *Research and Markets* states that the current Global Healthcare Robotics market is valued at US\$6.3B (2016) and is expected to grow at a CAGR of 22% to US\$20.6B by 2021.
- The second area is **Artificial Intelligence (AI).** With three AI hubs located in Montréal, Toronto-Waterloo and Edmonton, Canada is poised to realize the immense promise of AI for improving medical decision-making in diagnostics, prognosis, indirect patient care such as optimized hospital workflows and improved inventory management. It will also be of value in home care where wearable devices and sensors will be used to assess and predict patient needs. A *BIS Research* report states that the current Global Healthcare AI market is expected to grow at a CAGR of 50% to US\$50B by 2027. (Note: while there is some variability between research houses regarding the growth of AI in healthcare, all estimate a double-digit CAGR).

Case Study: Regenerative Medicine in Japan

In 2012, Japan won a Nobel prize for regenerative medicine and, a year later, announced a strategy to build their domestic industry to become the regenerative medicine center of the world. Over the past 6 years, Japan has built a regenerative medicine (“Regen”) cluster through government support and regulatory reform. Prime Minister Shinzō Abe’s government committed to invest \$1B over 10 years to this effort. The “Abenomics” growth strategy included changing the regulatory pathway for Stem Cell therapy research & commercial approval and provided full commercial access (with reimbursement) to the Japanese market within 3.5 years vs. the normal timeframe of 10 years. Japan’s Regen market will be worth an estimated US\$30B by 2030.

Creating competitive regulatory environments to attract significant foreign investments while simultaneously becoming effective receptors of innovation are strategies currently being employed by Germany, Sweden, Denmark, Australia and the United States. We would strongly recommend that Canada adopt a similar strategy to grow globally competitive clusters.

Recommendation 5: Capital Investment

As part of the current US government's tax reforms completed in 2017, the US has created a new Accelerated Capital Cost Allowance for corporations making capital investments in the US. This comes on top of other changes such as a decreased combined corporate tax rate for US corporations. The combination of these changes has served to cool the climate for business investment in Canada relative to the United States.

ISED has significantly worked to increase corporate investment in the Canadian Life Sciences and Medical Technology sectors. Since Capital improvements are one of the best mechanisms to generate an increase in productivity, MEDEC believes that a new Accelerated Capital Cost Allowance would provide for broad competitive benefits and would create the preconditions for more investment by MedTech companies in Canada.