



Hon. Mary Collins, P.C.
Chronic Disease Prevention Alliance of Canada, Chair
Speaking Notes
Technological innovation and the prevention of Chronic Diseases
April 30, 2013

Mme Chair & committee members, on behalf of the Chronic Disease Prevention Alliance of Canada (CDPAC), we would like to thank you for the opportunity to share our perspectives on federal government roles and priorities related to technological innovation for disease prevention and promotion of healthy living in Canada.

I'm Mary Collins, Chair of the CDPAC Alliance, and Director, BC Healthy Living Alliance Secretariat. I'm accompanied by Mr. Craig Larsen, CDPAC's executive director.

CDPAC is an alliance of nine national NGOs. We share a vision of an **integrated and collaborative approach** to promoting health and preventing chronic disease in Canada. Our key activities include *knowledge mobilization* and *advocacy* for evidence informed policy. We work primarily at the federal level, though we also communicate with the Council of the Federation to help inform provincial/territorial action.

Given the standing committee's previous studies, I realize you are well aware of the magnitude of impacts that chronic diseases have on the health and well being of Canadians, on our health care systems, and on the economic prosperity of our country. But, allow me to reiterate a few of the facts:

- Three in five Canadians over the age of 20 is living with a chronic disease, and four in five has at least one risk factor
- The costs of managing chronic diseases in Canada currently account for 58% of all healthcare spending, and are estimated at \$68 billion annually
- Indirect costs associated with income and productivity loss are double that, at \$122 billion
- In Canada, 67% of all deaths per year are caused by four major chronic diseases: cancer, diabetes, cardiovascular and chronic respiratory diseases
- Diabetes is one of the fastest growing diseases among Aboriginal populations
- The current generation of Canadians is likely to live shorter lives than its parents

- The four major risk factors for chronic disease are modifiable: unhealthy diet, physical inactivity, tobacco use and inappropriate alcohol use. And thus, much of the impact of chronic diseases is **preventable**

How can technological innovations help us bend the curve of chronic diseases which have grown so extensively over the last decades not only in Canada but in almost every other developed and even developing countries? This is a field that is just beginning to open up and the opportunities are virtually endless. We have already witnessed tremendous benefits of technology in assisting those with chronic disease to be more effective at **managing** their diseases, such as through modern monitoring devices which help people with heart disease or diabetes to track their condition and know whether they are doing well, require self-care actions or need medical intervention. There are many other examples of success stories already, but where do we go next to take technological interventions to the next level for chronic disease **prevention**? How do we target them at the greatest areas of need while at the same time taking advantage of the easy wins to help advance the wave of technology use for healthy living?

The Electronic Era - with the plethora of information available through websites, applications (or “apps”) and social media, consumers are becoming much more health savvy than ever before, and thus, increasingly amenable to a broader role for technologies in supporting healthy living. Electronic tools are critical. We know that provision of data and information alone will not mitigate the preventable risk factors for chronic disease. Vitally important are technologies that make it easier for people to access, interpret and apply the confusing masses of ‘info’ that most Canadians literally have at their finger tips...

We do know from the most recent Statistics Canada data that 79% of Canadian **households** have Internet access - **including 71% of households outside census metropolitan areas** or census agglomerations. Similarly, **mobility** is a widespread phenomenon. According to the CRTC, there were 25.8 million wireless subscribers in Canada in 2010. And in 2012, the Canadian Wireless Telecommunications Association reported that 48% of Canadian mobile phone users use smartphones ... 70% of which have downloaded applications 34% being apps for health, fitness and wellness! That translates into a lot of capacity and interest available for us to tap into for healthier living and chronic disease prevention.

“Growing ownership of connected devices and the access to digital health tools and information they provide is helping drive the broader shift from intermittent to continuous care. This trend shows vast potential for changing key dynamics of healthcare delivery, including patient engagement, provider involvement, and how preventive care is incentivized.”

And, well said by Dr. Jay M. Bernhardt, Director of the US National Center for Health Marketing, in 2009, We can put health-related information on television, on billboards, or your doctor can tell you... but one of the big problems with mass communications is that it’s hit or miss... while mobile technology is always within arm’s reach.”

Clinical Applications - clinicians too are looking at technologies to provide them with quick, accurate, and efficient assessment tools. They don’t always have the specialized knowledge (or the time) to make dietary assessments or offer practical strategies to support patients’ behaviour change, and thus are increasingly avid users of apps. Technology accelerates such clinical processes, for practitioners and patients alike, and helps improve the accuracy and completeness of measurements.

Smoking Cessation Apps – we certainly have good apps already which show how technology can assist primary health care physicians and nurses in gaining quick and easy access to information on smoking cessation to be passed on to patients in a timely way. But, what about people who are indeed trying to give up smoking? They likely have friends and family members in the settings where they live and work who still smoke. Not easy to hold one's resolve when you're out for the evening with friends for dinner or at a bar! The same applies to alcohol use - one drink only? We could make a lot of headway on chronic disease prevention if we could develop and promote apps that 'make the healthy choices the easier choices' and that help us to stay the course across the various settings where we live our lives. ...For example, to extend the 'buddy' or 'mentor' approach through mobile and other technologies.

Nutrition Apps - diet is one of the major modifiable risk factors for cancer and other chronic diseases. Yet to date, knowledge about diet, nutrition, and cancer/chronic disease prevention has been slow to move into mainstream practice. In our daily lives we all have to navigate complex, and sometimes overwhelming, point-of-purchase food environments. In rural and remote communities there is often minimal access to resources and services that can help in the self-management of healthy eating. The academic sector needs tools to conduct practice-based research and evaluate the food and nutrient intakes of study participants. And for all levels of government, food policies are often challenging to implement effectively because of an absence of supportive tools. So again in the area of nutrition there are many streams of potential support by technological innovation. The same is true for physical activity.

Social Media - the advent of social media has dramatically increased the volume and speed at which information is shared. Gone are the days of waiting for written letters or even the newspaper. We are now almost instantly able to share up to date information about what is happening in our life, our neighbourhood, our community, our world. Surely we can harness this approach, perhaps in conjunction with various apps, to help us all – young and old – to be able to obtain both **information** and **support** in helping us live healthier lives.

Electronic Health Records – how many years have we been discussing the importance of having individual health records that can accompany us throughout our lives and be easily transferred from one practitioner to another – from one location in the world where we may reside to another. Access to such records could surely benefit patients by increasing their awareness of **their own** risk factors, making them more predisposed to undertake lifestyle modifications to prevent or manage chronic diseases – which are fundamental cost escalators in our health care system.

And yet we still are stymied with privacy concerns, sharing of information between health care practitioners and patients and being able to share records even between adjacent health authorities or different parts of the health system. Millions – I would expect billions of dollars have been spent and yet we are hardly down the road.

Surely this is an area that needs some near-term, solutions-oriented attention. The technology is within our grasp. We just haven't solved the soft problems, the interoperability challenges, or overcome the propriety nature of much of the technology involved.

Linkages – another area where technology could continue to be developed is that of linkages across health and other sectors. Within health itself, I would like to highlight the need for tools and mechanisms to support:

- better linkages between primary care and chronic disease prevention
- new models of integrated care (e.g. team based approach)

Caveats – Clearly, technological innovation has much to contribute to chronic disease prevention, but we feel it is important to reiterate two key concerns that have always been at the forefront of health information custodianship, whether housed and conveyed electronically or otherwise:

- Privacy – while Canada has a complementary and effective compendium of federal and provincial/territorial privacy legislation, personal privacy must remain an essential underpinning of all strategies that deal with health information.
- Quality control/evidence-informed messaging – there are challenges in being able to differentiate between scientifically valid information versus that which is pop or only commercially driven. The public and other users of online information need mechanisms, protocols and protections to help with this. Certainly the federal government along with other partners could play an important role in helping the public assess the validity of claims being made in apps, social media and other online sources. I recall some years ago Health Canada did in fact invest in a program that provided reliable health information on the internet – today it need to be even more accessible.

The FDA in the US is working on guidelines that will regulate certain health apps, in a similar approach taken to that for medical devices. The US federal government is also watching to make sure no outlandish claims are being made by these apps. An example of why this is needed? Last year the US Federal Trade Commission actually removed a handful of apps from Apple's app store that claimed to help users cure their acne just by shining a blue light on their face using the iPhone screen.