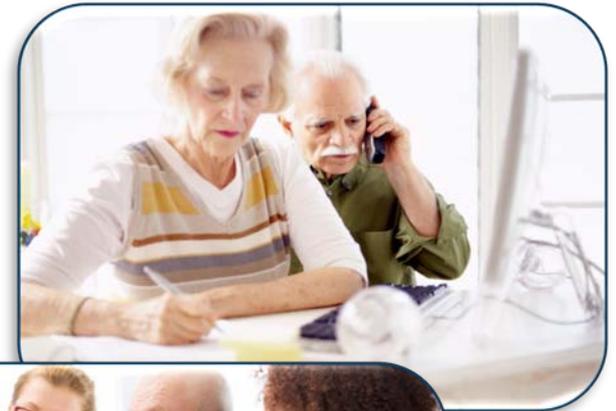


Telehealth Benefits and Adoption

Connecting people and providers
across Canada

2011 Home Care Summit
Niagara Falls, Ontario, Canada



About the study

Canada Health Infoway (*Infoway*) commissioned Praxia Information Intelligence and Gartner to undertake a pan-Canadian study aimed at describing the use of telehealth technology and the benefits achieved to date.

As outlined in the report, *Telehealth Benefits and Adoption: Connecting People and Providers Across Canada*, telehealth has delivered a number of access, quality and productivity benefits for clinicians, patients and the health care system.

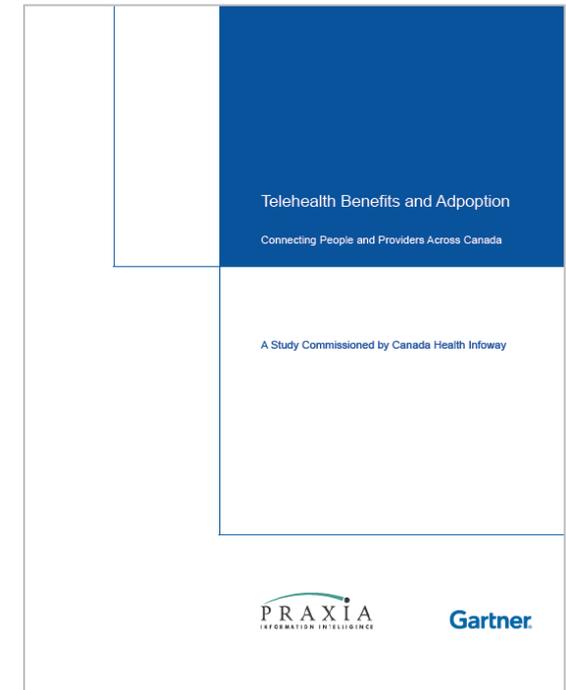
Canadian context for telehealth

- A concentration of specialists in and around major urban centres
- Canada's vast geography makes it difficult and costly for some patients and clinicians to connect face-to-face
- Canadians living in rural or northern areas must often travel long distances to access specialized health care



Study methodology

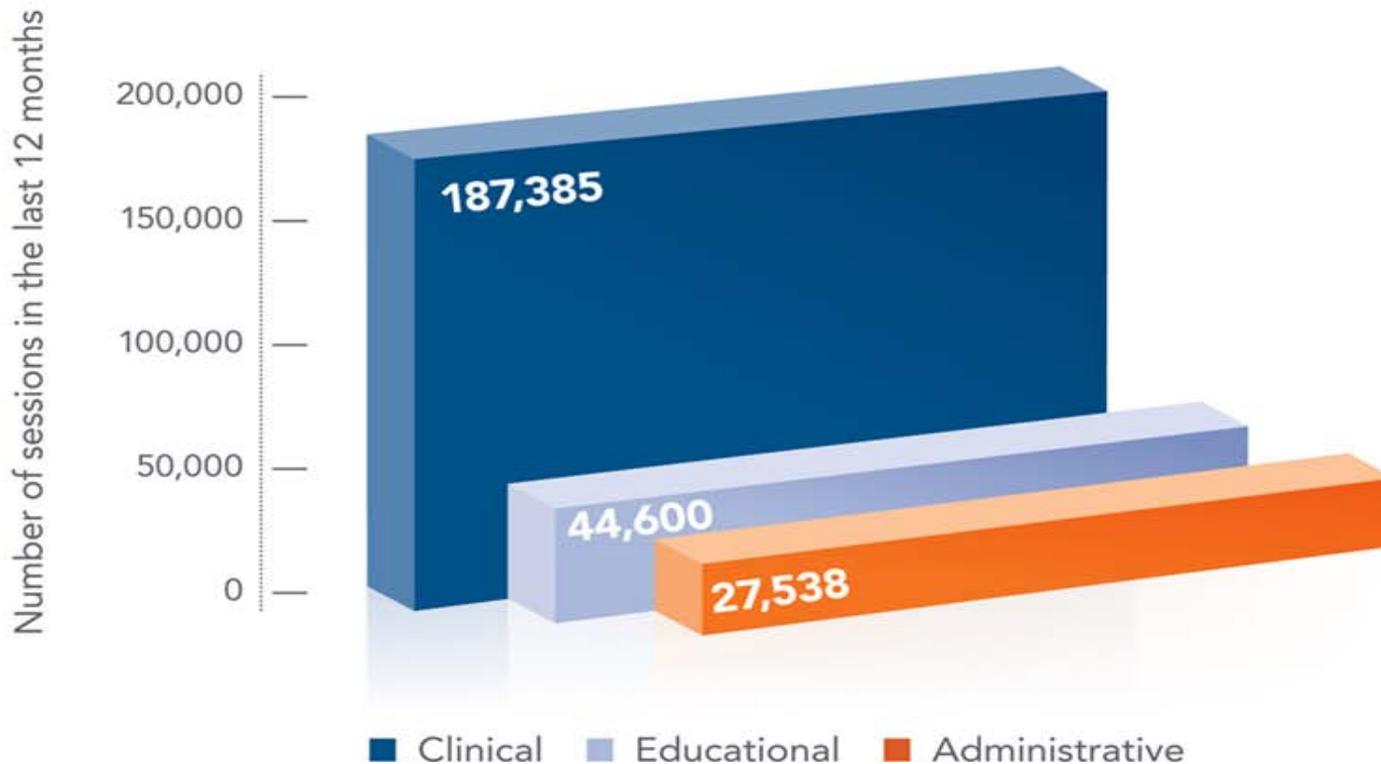
- The benefits evaluation process employed a combination of quantitative and qualitative methods
- Where possible, quantitative methods were used to calculate current benefits and to forecast / extrapolate potential future benefits
- Qualitative methods of inquiry were used to gain an in-depth understanding of benefits experienced by users, and to give context and to help interpret the quantitative data



Current state – Telehealth utilization

- 5,710 telehealth end-points in 1,175 communities
- In 2010, there were nearly 260,000 telehealth events in Canada

Total Number of Telehealth Sessions in 2010



Study findings



Current benefits – Access

- Telehealth events saved rural Canadians approximately 46.8 million kilometres of travel, representing:
 - 5.6 million litres of gasoline
 - Nearly 13 million kilograms of CO₂ emissions (equivalent to 2,760 fewer cars on the roads)
- Some telehealth programs demonstrated significant improvements in the timeliness of care received
 - Store and forward applications of telehealth, reduced wait times for some dermatology programs from seven weeks to 10 days
 - Teleophthalmology wait times were observed to decrease from about 25 days to less than two days
 - Other programs that experienced a decrease in wait times included Telecrisis, Telewoundcare and Tele-endocrinology
- Telehealth helped patients save approximately \$70 million in personal travel costs

Case study – Access

Telehomecare – Yukon

- Homecare staff in the Yukon use tablet computers to complete assessment forms and enter progress notes during patient visits. Benefits include:
 - Patients can collaborate in the process
 - Information is available online faster
 - Care decisions can be based on timely information

"Our caseload is expanding. Using the tablets allows us to get new information into the system quicker than before. And that benefits our patients and our health care providers."

Current benefits – Quality

- Over 80 per cent of patients reported satisfaction with remote services citing better capability to manage their care and measurable improvements in clinical outcomes
- Telehealth was also used to deliver thousands of education sessions and linked clinicians with different skills and experience, providing opportunities for mentoring and skill development
- Studies show that telehealth can improve timeliness of care leading to improved outcomes
 - For example, doctors at small hospitals can consult with neurologists using Telestroke technology and administer appropriate therapy within a crucial three-hour window

Case study – Quality

Teledialysis – Newfoundland and Labrador

- Dialysis patients in remote clinics throughout the province get weekly visits from nephrologists via telehealth. Benefits include:
 - More frequent appointments lead to improved care decisions
 - Test results are discussed in real time
 - Reduced travel for doctors means more patient visits

“This vulnerable patient group tends to be elderly and very ill. Telehealth is allowing us to interact with them on a more regular basis and gather the first-hand knowledge we need to optimize their care.”

Current benefits – Productivity

- By using Telehomecare in some provinces (ON, QC, AB and BC), hospitals or health regions avoided an estimated \$915,000 in emergency department visit costs and about \$20 million in inpatient costs over the study period
- Savings in provincial and federally subsidized travel through current telehealth programs are estimated to be \$34 million
- In three reports detailing how telehealth affected provider time, 25 clinicians saved 496 days of travel time

Case study – Productivity

Telethoracic Surgery – British Columbia

- Thoracic surgeons use videoconferencing for patient consultations and post-operative care. Benefits include:
 - Nearly four million kilometres in travel costs have been saved since 2003
 - Reduced travel time means surgeons can see more patients
 - Patient information can be shared during telehealth sessions

“It’s much more efficient to have the patient have all these tests done in an orderly way, have all their appointments done in an orderly way, and they flow into the system and out without any undue wasting of time.”

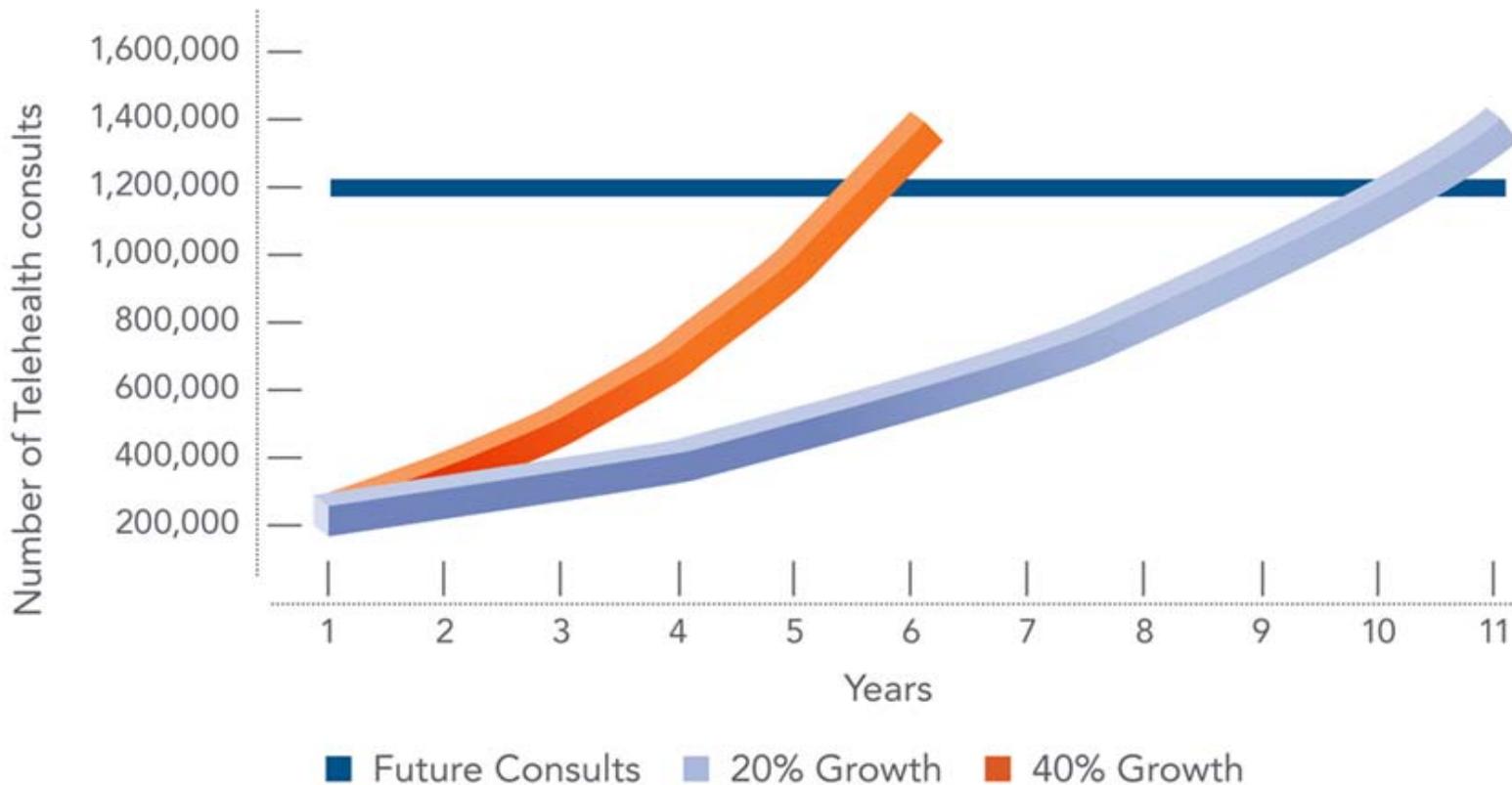
Where do we go from here?



Growth of telehealth in Canada

Telehealth use has grown at a rate of over 35 per cent annually over the past five years. Assuming growth of 20 per cent and 40 per cent per year, 1.2 million consultations could be reached within five to 10 years.

Years to reach estimated future number of Telehealth visits

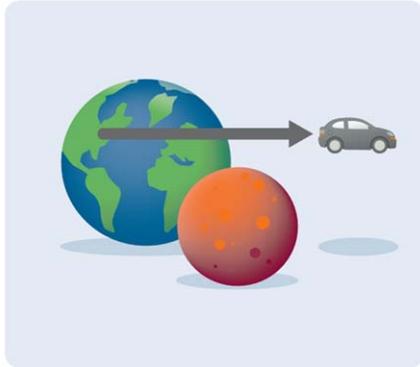


Potential future benefits – Patients

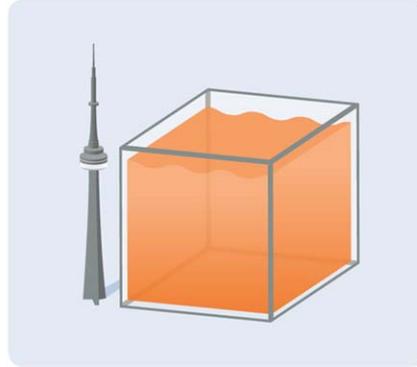
- Likelihood of improved outcomes if Telestroke were adopted as a standard best practice
- Patients living with chronic conditions, especially in rural areas
- Potential for patient travel cost avoidance of about \$440 million
 - Extrapolated 600,000 rural telehealth visits annually
 - Average of \$750 of patient costs saved per trip

Potential future benefits – Environment

- With an assumption that half of all potential telehealth events are for rural consults, approximately 600,000 rural telehealth events may occur in the future. These events could avoid:



Close to
300 million kilometres
of travel



Nearly
35 million litres
of gasoline



80 million kilograms
of CO₂ emissions

Potential future benefits – Health system

- Estimated 300,000 face-to-face physician visits potentially replaced with a telehealth encounter:
 - Approximately \$92 million in travel subsidies avoided
- Increased use of Telehomecare:
 - \$540 million in inpatient costs per year
 - \$23 million in emergency department visit costs per year
- Increased productivity through asynchronous (store and forward) technologies:
 - Approximately \$10 million in physician equivalent costs

Critical success factors and recommendations



Critical success factors

- Based on the experience of current telehealth programs, critical success factors include:
 - Clinician reimbursement
 - Professional development
 - Technology implementation
 - Licensure and other regulatory issues
 - Governance and policy
 - Change management and adoption
 - Benefits realization and measurement
 - Funding for implementation and transition to the mainstream



Thank You

For more information on the study, please go to [Bitly.com/infoway-telehealth](https://bitly.com/infoway-telehealth) or scan the code with your smartphone.

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