Canadian Model for Health System Innovation:
Transformational Care for Aging Populations
Dr. Anne Snowdon
Chair
Health Care in Canada

• Health Care is a deeply embedded in the Canadian identity.

• Sustainability is a significant challenge

• Aging population and rising rates of chronic illness

• Growing consumer influence on health care.
Canada’s Performance to Date

- healthcare consumes **50%** of tax revenues
- among the **highest** cost/capita of OECD countries
- wait times and ALC rates remain a challenge
- **lowest** EMR adoption in the world
- increasing rates of chronic illness
- ranked **13 of 17** in use of innovation
Health system goals viewed as very important

Source: Mendelsohn M. Canadians’ thoughts on their health care system: preserving the Canadian model through innovation. Commission on the Future of Health Care in Canada; 2002 June. Figure 87, How important should each of the following goals be for the health care system; p. 68
Self-Reported Health Status by Sex, 1994/1995-2009

Canadian Index of Health and Wellbeing, 2010

Percent rating health as 'excellent' or 'very good'

- Both sexes
- Males
- Females

IVEY International Centre for Health Innovation
Cost vs. Quality

Health Consumer Rank vs. Health Expenditure per Capita

Countries plotted include: Hungary, Portugal, Canada, Greece, Spain, U.K., Italy, Czech Republic, Finland, Ireland, Belgium, Sweden, Denmark, Norway, Luxemburg, Switzerland, Iceland, France, Austria, and Germany.
Collision of supply and demand drives up healthcare costs

New, more expensive therapies and diagnostic tools

Major information projects

New medical disciplines

Higher expectations

Aging populations

Lifestyle-driven disease

New infectious diseases

Supply forces

Demand forces
What do Canadians Value?

Patient Experience, Stewardship, Teamwork

Quality of Life, Health, Wellness

Collaborative Partnerships with Providers

Sustainable, Integrated Care

Community Governance, Equity

Leader of Quality Advocacy, Professionalism

International Centre for Health Innovation
Are Health Systems delivering on the Value Proposition to Canadians?

- **Basic Needs (survival)**
- **Safety Needs (comfort)**
- **Psychological Needs**
- **Self-Actualization**
- **Peak Experiences**

Canadians’ Health Care Values

Current Health System values and performance metrics
# How Performance Metrics Align with Values

<table>
<thead>
<tr>
<th>Canadians’ Values</th>
<th>Performance Metrics</th>
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<tbody>
<tr>
<td>Excellent Care</td>
<td>Safety (falls, infections, pressure ulcers, mortality)</td>
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<tr>
<td>Organizational Reputation</td>
<td>Survey item: “would you recommend this hospital?”</td>
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<tr>
<td>Sustainability</td>
<td>Cost/case, total margin</td>
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<tr>
<td>Community: equity, access</td>
<td>Wait times for ED, surgery</td>
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<td>Health System Stewardship</td>
<td>Expenditures as % GDP</td>
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INNOVATION TRENDS IN HEALTH CARE

Consumer Trends

Aging Population: “Boomers”

Drive to Achieve Value in Health systems
Consumers who will Transform Health Care: Women and Baby Boomers

- Women, 48 years old make majority of health decisions for families
- 7 million women in Canada provide care for both children and aging parents
- Need to transform from provider focused to **consumer focused**
Consumer Drive towards Mobile health

• Women 45 years old and older are the group most responsible for growth in social media site usage
• Women spend 24.8 hours per month online
• Women and people between 35 and 54 years old are most apt to perform social networking activities via mobile device
Consumers of the Future?

- People 45-plus account for **43%** of all Canadians.
- Baby boomers are responsible for **over half** of all consumer spending in the United States.
- The very first baby boomers turned 65 in January 2011.
- **Four million** boomers will retire each year for almost two decades.
- There are now more people in Canada over 65 than under 14.
- **279,000** Canadians have recently, or expect to become, caregivers to an elderly relative.
The world in which Boomers grew up conditioned their expectations for the future

**Economic prosperity and affluence**
Boomers grew up during a long period of economic prosperity and relative wealth.

**Cheap energy**
The affluent middle-class lifestyle that defined the American made possible by the low price of oil, made car ownership a possibility for most.

**Material security**
Boomers are used to a high standard of living and material comfort, with easy access to credit and low interest rates.

**Easy access to goods and services**
Few Boomers have ever known shortages of goods or services.

**Social optimism**
The victory in the Second World War and the sustained scientific and technological innovation, boomers are optimistic about society’s ability to advance and progress.
Baby Boomers: Core Values

- **Individuality**
  - “I don’t want to be like anyone else.”

- **Self-Focused**
  - “My fulfillment comes first.”

- **Agelessness**
  - “I will continue to be active on all fronts, no matter how old I am.”

Magna, 2012
Given these core values, Boomers are constantly striving to meet these goals

To achieve meaningful rewards

To be self-sufficient and remain in control

To stay young forever
Baby Boomers: Dominant behaviors

• Always looking for the next adventure (and buying it)
• Searching for/spending that aid their never-ending self-exploration journey
• Looking for experiences that make them feel special, unique, and respected
• Instant gratification, living in the moment
• Strive feel on top of things, in control, and not missing any information – Boomers hate not knowing things
How do we deliver on the Value Proposition for the Population?

Health System Innovation

Leverage consumer engagement to drive innovation and change

Measure impact in terms of value
How do you Transform the Health System? Move Care Upstream, in “the palm of your hand”

• Personal Health Records empower consumers to manage health and wellness

• Give people the tools to manage their own care and communicate with providers

• Use Hand-held, point-of-care devices to redesign how care happens
Mobile Health Tools: the eMoCA

- Study: created electronic version of MoCA test, tested on 400 adults.
- No significant difference in average test scores between two groups.
- Time for test completion accounted for difference in scores.
- eMoCA may offer easy screening for cognitive changes in primary care practices.
Self-Administration of eMoCA

1. Instructions from the tablet based on recorded voice of actor give clear, consistent instructions uniformly across all participants.

2. The participant either responds verbally or uses stylus to draw on the tablet to complete cognitive assessment.

3. The tablet repeats instructions if time-out waiting for a response occurs.

4. The researcher scores participants recorded responses.

This version of the eMoCA was developed by the authors of this poster.
AngioDefender™

“The best early indicator of cardiovascular risk that impacts both heart health and vascular dementia.”

Lord Howe is amongst the attendees at Healthcare Innovation Expo, London, 13-14 Mar 2013, seeking information about AngioDefender.

Everist Genomics – helping Ivey lower cost and improve outcomes.
Caregiver Burden of Alzheimer’s and Dementia: Opportunities for Innovation

• By 2038, 561,000 Canadians with Alzheimer’s disease (AD)
• Cumulative cost = $153 billion
• Home care services: underfunded (3.5% system costs)
• Emerging findings:
  – Caregivers need Coaching, navigating system
  – Social networks, respite critically important to reduce risk of burnout
  – Substantial private costs to families spent on purchasing support services
Innovation in Dementia Care: “Innovation Laboratory”

- 45 bed retirement home for people living with dementia

- Leverage innovations to create personalized models of care and supportive environments for quality of life:
  - Sensor surveillance and personal communication systems
  - Electronic access to social network
  - Agitation prediction sensors
  - Caregiver training protocols

B’nai Brith Centre of Innovation Excellence for Alzheimer’s Care
An Expanded Model of Pharmaceutical Care in the Grocery Environment

• Grocery retail environments are shifting towards health and wellness market

• Pharmacists are most trusted and most accessible, viewed as “surveillance” for quality care

• collaboration with dieticians, offering a comprehensive management of disease risk.

• Emerging focus on chronic illness, diet and lifestyle
Trends in Innovation Research

- Value based health care
- Personalization of health services to achieve health and wellness outcomes
- Shift from hospital dominant to Integrated community services to achieve value for Canadians
- Move health care “upstream”, shift from provider centric to consumer centric
Shift Performance metrics from Provider Centric to Consumer Centric

Provider

- MD Costs
- Procedure & Equipment Costs
- Adverse Events, Mortality
- Wait Times

Consumer

- Quality of Life
- Community Engagement
- Care Coordination Integration
- Equity & Access
Sharing Lessons Learned

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LINKS e-Portal
Our Unique Approach & Business Model

International network, resources and talent
BUILD THE EVIDENCE FOR INNOVATION ADOPTION

Research Innovation
- New technology
- New therapies

Proof of Concept

Clinical Innovation
- Patient care implementation
- Clinician adoption
- Integration into service delivery

Proof of Relevance

Innovation Adoption across Health Systems
- IT decision support
- Service delivery model redesign
- Performance metrics support adoption
- Financial model for reimbursement
- Leadership to drive innovation
- Clinical guidelines Integration
- Consumer uptake

Proof of Value and Reimbursement
Our Innovation Model

Private Sector

Policy Maker

Academic Research Team

Health System

Pharma, IT, Biotech, Medical Devices, Finance

Medicine Health Sciences Engineering Business Computer Science

All levels of government, regional bodies

Public health, primary care, acute care, community care

Leverage Network, Capabilities and Capacity
Creating Culture of Innovation

• Create **Cultures of Innovation**
  – “Living Laboratories”

• Build **Leadership Capacity** for innovation and entrepreneurship

• Build **Collaborative Networks** to develop and test new or existing technologies in the health sector

**Outcomes:**

- ✓ Strengthen health system productivity and sustainability
- ✓ Build innovation capacity
Conclusions

“Strive not to be a success, but to be of value”
- Albert Einstein

- Transform Canada’s health systems to achieve Canadian values of health, wellness and quality of life
- Measure success of health systems in terms of values, sustainability and innovation
- Disseminated and collaborated across health systems to accelerate innovation – global innovation pipeline
Thank You

www.ivey.ca/healthinnovation

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