Chronic Disease Prevention
Challenges in Canada

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The Canadian Context

Individuals and families
2 out of 3 Canadians will develop a chronic disease

Population
Every five minutes somebody in Canada dies of a chronic disease

Chronic disease accounts for 87% of disability in the Canadian population

High-risk groups
Increased prevalence in vulnerable communities (e.g. Aboriginals) and in socio-economically disadvantaged groups.

Economy
Direct health care costs: 67% of total direct costs are expended on chronic diseases – or $190M per day or $69B a year

Indirect costs: 69% of total indirect costs ($52B) from loss of productivity and foregone income
What did Canadians die of in 2008?

- Cancer: 71948
- Circulatory: 69945
- Injuries: 5386
- Mental Disorders: 4704
- COPD: 4704
- Neurodegenerative: 7521
- Diabetes: 10495
- Infectious: 9731
- Influenza/Pneumonia: 11535
- Other: 15439
Age-standardized mortality rates, all cause mortality, males and females, Canada, 1926-2008

Standardized to 1991 population
Circulatory Disease age-standardized mortality rates per 100,000, 1950-2008
Commonality of Risk Factors and Determinants
Deaths (‘000) attributable in 2004 to selected risk factors, USA and Canada

Source: WHO Global Health Risks
Attributable DALYs (‘000) by selected risk factor, Canada and USA, 2004

Source: WHO Global Health Risks
Chronic Disease Prevention Challenges in Canada

• Aging population

• People are living longer/chronic diseases differentially affect the elderly
  – Greater previous success in preventing/controlling chronic diseases that kill compared to those which disable

• Disquieting trends in obesity/sedentaryism, particularly in children
The Population is aging

Estimated Proportion of the Canadian Population Aged 65 or Over 2000 - 2040

Graph: Health Canada, 2001
People are living longer

- We have seen major public health successes in:
  - Tobacco control
  - Injury prevention
  - Heart disease prevention/management
The success of tobacco control in Canada
Injury prevention

• Seatbelts/airbags

• Restrictions on baby walkers

• Requirements for helmets
People are living longer with chronic diseases

- We have seen major improvements in the prevention/treatment of coronary heart disease
  - Statins
  - Better blood pressure control
  - Stents/coronary bypass surgery

- People with diabetes are living longer, in part due to more aggressive treatment of comorbidities such as elevated blood pressure and cholesterol

- Age-adjusted prevalences are going up for many chronic diseases such as diabetes
People are living longer with chronic diseases

• We are not doing well at preventing a number of chronic diseases with high economic and social costs:

• Mental illness

• Neurodegenerative diseases

• arthritis
We are seeing increases in obesity/sedentarism

- Over half of Canadian children 5-17 years old are not active enough for optimal growth and development.

- Obese children and adolescents demonstrate increased prevalence of elevated blood pressure and dyslipidemia (risk factors for cardiovascular disease)

- Although still rare, we are seeing increasing numbers of adolescents developing type 2 diabetes

- Childhood obesity rates almost tripled between 1978 and 2004
Preventing childhood obesity is important

• Children are a particularly vulnerable group:
  – Growth and development
  – Health problems during childhood
  – Psychosocial problems during childhood
  – Tracking into adulthood
  – Difficulty of treating established obesity
  – Little control over their environment

Source: Shiriki Kumanyika, Healthy Weights: The Importance of a Health Promotion Approach
Adult obesity continues to rise

Much of the chronic disease burden could, at least in theory, be prevented

- Clinical, epidemiological and community research over the last 30 years show that if we fully applied what we know:
  - 70% of premature deaths and two-thirds of chronic disability are preventable
  - 90% Type II Diabetes, 80% Coronary heart disease, 30% of Cancer
Healthy Public Policies

• “All significant advances in population health involve the use of law and regulations”
  - Geoffrey Cannon, 2009/2009 WCRF/AICR policy report, chapters 2-6

• A challenge is that most of the healthy public policy levers lie outside of health departments

• Changes in law and regulations require political and bureaucratic will.
  - Requires a strong evidence base that will withstand legal scrutiny
    • This is often a problem for chronic diseases
“The health of the public is the foundation upon which rests the happiness of the people and the welfare of the state.”

Disraeli