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The BIG Idea: "first Health, then Medicine"

keeping more people healthier longer

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Elevator Talk

"Please step in and join me on this elevator ride:"

First floor: did you know that up to 70% of the reasons (illness, injury) why people go to hospitals and clinics are preventable?

Second floor: did you know that in Ontario, we have moved from 32% of the provincial budget expenditures on health a decade ago, to 46% today (2007) and upwards with a projection that by 2030 the proportion of government spending will be 100% on health?

Third floor: did you know that one third of youth and adults in Canada have chronic health conditions such as diabetes, heart disease, cancer, arthritis?

Fourth floor: did you know that over 95% of the approximate $160 billion in healthcare funding in Canada goes to medical care and rehabilitation, less than 5% goes to prevention? In Ontario, the Ministry of Health Promotion's budget of $396.2 million is approximately 1% of the Ministry of Health and Long-Term Care's $37.7 billion budget.

Fifth floor: did you know that healthy people need medical treatment less often and respond more effectively when treatment is required?

Sixth floor: Canadians do not have equal access to health care, let alone the conditions for good health. Those who live in the poorest communities have a much reduced life expectancy and quality of life?

"Now, lets return to the ground floor while I tell you about the Big IDEA for addressing these challenges for sustaining our health care `system."

An Invitation

I invite you to join me and other concerned people in a journey to provide fresh thinking and action for addressing the looming crisis in health care: locally and globally.

Our aim is to engage diverse stakeholders in a collaborative venture for designing and testing interventions aimed at dramatic improvements for *"keeping more people healthier longer".* To accomplish this we need to venture beyond the traditional boundaries of the health (medical) care and public health systems. Many other factors contribute to healthy life years and reducing costs. The key process is co-creation of the "total health system". This will require the passionate involvement of a broader range of 'experts'.

This project is conducting a Challenge Dialogue that will produce some initial directions for new types of action.

Your feedback is welcomed: Email:hskinner@yorku.ca or Tel: 416-736-5340

THE CHALLENGE

The health care system is in deep trouble. Many people do not have ready access to appropriate services when needed, and are not benefiting from for our knowledge about what determines health. This is in spite of numerous commissions and task force reports, various efforts at restructuring and integration, and rapidly rising investments (expenditures) in health care. In Ontario, we have moved from 32% of the provincial budget expenditures on health a decade ago, to 46% today (2007) and upwards with a projection that by 2030 the proportion of government spending will be 100% on health. The epidemic of diabetes alone will help drive the health expenditures in Ontario to above 50% within the next five to ten years. At this point, the system may likely implode.

Fresh thinking and action are urgently needed – but how?

York University's new Faculty of Health has an ambitious mission to be an integrative force for promoting health – locally and globally. Our vision is to redefine and advance approaches for keeping more people healthier longer. This will require new types of partnerships for co-creating the total health system (integrating health care, prevention and health promotion).

"Upstream-Downstream Dilemma"

A doctor and his family are having a picnic one afternoon at a park beside a river. As they are enjoying their leisure, a shout is heard from someone who is floating down the stream. "Help", "Help", "I'm drowning". The doctor rushes over to the stream, jumps into the water, swims out to the drowning person and heroically brings him back to shore where he applies resuscitation. The person is immensely grateful.

The doctor returns to his family and rejoins their afternoon lunch. Suddenly, he hears someone else shouting from the stream: "Help, Help!" So once again he rushes to the river, jumps in, swims and then brings the woman back and successfully resuscitates her. This process goes on and on as the young doctor hears more and more people shouting from the river "Help, Help!" The doctor finally becomes exhausted and in exacerbation raises the question: *"What's going up stream that is causing the people to jump into the river?"*

Looking upstream we see fires in many of the communities which are forcing inhabitants to flee and jump into the river for safety. What is fueling this fire? Upon closer scrutiny, one finds that it is the poor people who are more likely to have fires set near their crowded homes, whereas the richer people up on the hill are in relative safety. Also, one tends to see more older and frail people falling into the river.

This story provides a graphic depiction of the limits of our curative approach to healthcare (downstream) and the relative inattention to the broad determinants of health (upstream) that important for keeping people and communities healthy.

The Total Health System

Although the upstream-downstream metaphor is useful for communication and public engagement purposes, a broader and integrative approach is need for addressing the challenges with effective responses. Indeed, we need fresh thinking and action. The 'total health system' includes:

a. Understanding the various pathways to health and illness (biological, behavioral, social, environmental, health care)
b. Integrating levels of analysis and interventions (molecular to global)
c. Adapting to challenges of different life course stages
d. Addressing the causes of social inequalities in health, especially poverty reduction and disparities in access to services for health promotion and care.

The Total Health System perspective draws on frameworks variously described as the: social determinants of health (WHO Commission), WHO - Ottawa (1986) health promotion charter, population health model, social ecology or ecosystem perspective.

Crisis, what crisis?

Every day in the media we are bombarded by stories regarding the latest "crisis" in the healthcare system: e.g. waiting lists for procedures, ambulances driving around to find an open emergency department, patients dying from hospital based infections, shortage of the latest drugs for treatment ... At the same time, stories abound in the media regarding the latest "discovery" in basic science (genomics) research with a cure just around the corner. Meanwhile healthcare expenditures just keep escalating. And, many people are getting sicker and living with chronic conditions such as diabetes.

One third of youth and adults in Canada have chronic health conditions such as diabetes, heart disease, cancer, arthritis that result in:

- 67% of all visits to community nurses
- 51% of all visits to family doctors
- 55% of all visits to specialists
- 72% of nights spent in hospitals.

In Ontario, we have moved from 32% of the provincial budget expenditures on health a decade ago, to 46% today (2007) and upwards with a projection that by 2030 the proportion of government spending will be 100% on health. The epidemic of diabetes alone will help drive the health expenditures in Ontario to above 50% within the next five to ten years. At this point, the system may likely implode. As the baby boomers are approaching their sixties, many with substantial financial means, the pressure will be immense to create alternatives which will likely exacerbate access for certain people (especially the poor). Our current pre-occupation with fix-it medical care and rising expenditures for the healthcare system are placing the principles of the Canada Health Act in jeopardy.

The preamble of the act states that the objective of Canadian Health Care policy is "that continued access to quality health care without financial or other barriers will be critical to maintaining and improving the health and well-being of Canadians. The primary objective of the Act is "to protect, promote and restore the physical and mental well-being of residents of Canada and to facilitate reasonable access to health services without financial or other barriers." To do so, the act lists a set of criteria and conditions that the provinces must follow in order to receive their federal transfer payments: Public administration, Comprehensiveness, Universality, Portability, and Accessibility.

A recent headline in the Globe and Mail (April 7, 2008) underscores the looming crisis in maintaining these five core principles.

"B.C. intent on tackling issue of funding in health care:
Province to defy Ottawa by enshrining fiscal sustainability in medicare laws"

B.C. Health Minister George Abbott wants to make fiscal sustainability a founding principle of health-care delivery, a measure flatly rejected by his federal counterpart, Tony Clement. "We will continue to embrace the five principles of the Canada Health Act," Mr. Abbott said in an interview. "We believe we should enshrine sustainability as a principle as well." Mr. Abbott said the province has to grapple with escalating costs that are threatening program spending in other areas. Health-care spending currently consumes about 44 per cent of the provincial budget. He said that by 2013 it is expected to chomp through fully half of all B.C. government spending. "Government needs to be conscious of the fact that we have 20 other areas of ministerial responsibility and service delivery besides health care".

Critics worry that the sustainability principle will push B.C. toward more privatized health-care services. "Adding a sixth principle to the Canada Health Act is opening the door to look at health care through a financial lens for the first time in history," said Leslie Dickout, a campaigner for the B.C. Health Coalition, a group that champions the protection and expansion of universal health care.

Many factors contribute to healthy life years and reducing health costs. The measurement of health-services inputs and health outcomes is of limited meaning because the pathways to health go beyond the health-care system. Other important avenues include social conditions (poverty), behavioral patterns (lifestyle), human biology (genetics) and environmental exposures. Everyone gets ill and /or injured at some point regardless of their social status. However, chronic diseases are pretty seriously socially graded.

While over 95% of the approximate $160 billion in healthcare funding in Canada goes to "downstream" medical care and rehabilitation, less than 5% goes to public health initiatives that can have substantial impact on reducing the demand for health services. How many more eggs should we put into the basket of funding healthcare services, versus investing in living conditions that are vital for keeping more people healthier longer? What will it take for us to get beyond our preoccupation with the Supply side of the healthcare system, and give equal focus to the Demand side of the equation?

Prevention and health promotion are effective ways to reduce the demand for health services. Healthy Canadians need medical treatment less often and respond more effectively when treatment is required. This investment will give our healthcare system some breathing space for improving access, quality and utilization. But, we need to get beyond our myopic focus on the downstream Supply Side of the health system.

Our goal is to keep more people healthier longer - maximizing years lived in good health versus years lived in less than good health due to disease and injury. This frames health care and costs within the big picture that all Canadians need to address.

Yet, Canadians do not have equal access to health care, let alone the conditions for good health. Those who live in the poorest communities have a much reduced life expectancy and quality of life. Strategies to improve Canada's health system and our

national health ranking must focus on leveling this field, since the poor are disproportionately affected.

Case Study: The Epidemic of Diabetes

The epidemic increase in diabetes provides a compelling story.

- Who is getting diabetes?
- Is it greater in certain social categories and specific populations?
- How does this impact the way we think about diabetes and its prevention?

Diabetes has now reached epidemic proportions. Never before have so many, and particularly so many young people, found themselves living with the disease that has no cure. Within Canada alone, two million people have diabetes. Research indicates that, by 2010, this number will rise to three million, representing 10 per cent of the population and a cost to society of over $13.2 billion per year. The high and rapidly growing rate of diabetes has created an urgent need to provide timely education that will enable young people to understand their diabetes and learn how to live with it successfully. As type-2 diabetes accounts for 90-95% of all diabetes cases in the general North American population - and the proportion is likely even much higher in the Aboriginal population.

In Canada, direct and indirect health care costs associated with diabetes are forecast to climb 75% over a 16 year period and are projected to be over $8 billion by 2016. Although several governmental and professional organizations fund research with the aim of discovering a cure (such as stem cell biology, pancreatic transplants, etc.), far too little funding is directed toward improving the lives of those living with the disease. Undeniably, increased physical activity is the single best “cure” for both preventing and treating type 2 diabetes. Yet funds to translate these research findings into community settings, where they will make a real difference, is scarce.

Advances in diabetes research have led to a greater knowledge about how to manage diabetes and prevent complications through weight reduction, blood glucose control, and exercise. Exercise has been found to be the single best treatment for the prevention and treatment of type 2 diabetes. The onset of type 2 diabetes can be delayed or prevented across a spectrum of ages by lifestyle changes that include a routine of moderate physical activity and modest weight loss.

While pharmacological interventions exist to help treat diabetes, they are far less effective and often come with harmful side effects including liver failure and heart failure. For example, *rosiglitazone* (a diabetes medication that lowers blood sugar) has recently been associated with an increased occurrence of cardiovascular complications. Another safer drug, metformin, does not prevent diabetes nearly as well as a regular regimen of exercise. To date, a limited number of studies have investigated the effects of exercise on the maintenance of endocrine pancreatic adaptations to worsening insulin resistance. Perhaps more importantly, effective interventions that promote improved lifestyles choices for people at risk for developing type 2 diabetes are scarce. These are interdisciplinary research areas that require further exploration.

The state of research today does not understand genetic influences for diabetes nor does it understand the triggers for the development of type 1 diabetes. Type 2 diabetes has become the most common metabolic disease in North America. Its cause remains unknown, but its increasing prevalence is paralleled by increasing obesity rates which is

also increasingly socially stratified. A comprehensive approach is needed that integrates social (poverty), behavioral (lifestyle), public policy (e.g.) interventions. There is an imperative for action that will attenuate the increasing rates of obesity and type 2 diabetes, seen now alarmingly in children and youth.

The Big Idea

First, Some 'Wicked Questions'

We need fresh thinking to get at the root of the healthcare dilemma and take decisive action. Here are some 'wicked questions' developed in consultation with Dr. Alex Jadad and Prof Brenda Zimmerman, to stimulate the rejuvenation of health care:

- What do we need to hold on to as we change health care and health promotion?
- How do we reconcile the upstream-downstream dilemma, when we have different agendas?
- How do we incorporate good ideas and practices from other countries, while taking the Canadian context into account?
- How do we create synergistic linkages between the 'professional' health care system and the 'hidden' health care system (i.e. family/friend care givers, volunteers and community support)?
- How do we increase involvement of the private sector in health care, while maintaining the principle of access?
- How do we address uncomfortable issues, such as inherent conflicts among policy makers, the public and health professionals?
- How do we enlist large numbers of concerned members of the public interested in improving the system and society at large (e.g., eDemocracy)?
- How do we reconcile the inherent tensions between:
    - Prevention and Cure
    - Hospital and Community
    - Patient and the Population
    - Patient-centered and Practitioner-centered
    - Public and Private sector interests
    - People and Technology.

At the core of the Big Idea is an integrative approach spanning health promotion, prevention and healthcare. The key is co-creation of the Total Health System. Our aim is to engage diverse stakeholders in a collaborative alliance for designing and testing interventions aimed at dramatically improving population health and rejuvenating the health care system. Emphasis needs to be given to both sides of the equation:

a) Reducing DEMAND: Keeping more people healthier longer

- Health Promotion: e.g. poverty reduction; active living
- Prevention: e.g. policies on motor vehicle safety
- Preparedness: e.g. public health threats

b) Enhancing SUPPLY: timely access to effective services

- Access – reducing disparities for individuals and communities
- Quality, safety and effectiveness (improving outcomes)

- Utilization (waste, integration, eHealth, EHR)
- Integration of caring processes across health and related systems
- Supporting the 'hidden' health care system, especially family caregivers
- Expanding our boundaries to access global health services.

Fresh Thinking: five alignment principles

1) Reframing: first Health then Medicine

a. Broaden public understanding about what keeps people healthy (determinants of health)
b. Shift the 95:5 balance of the $160 Billion health care expenditures in Canada (95% medical care; 5% prevention) towards prevention and health promotion. Indeed, achieve the 'tipping point' of 15% on prevention for qualitative system change
c. Engage the key sectors that shape health: education, environment, finance, law

2) Bottom of the Pyramid (Prahalad)

a. Give priority to populations and communities exposed to the most egregious conditions (Aboriginal peoples, homeless, other vulnerable populations)
b. Enable dignity and choice
c. Put the last first (Robert Chambers)

3) Co-creation PPP

a. Joint problem solving involving People, Public sector and Private sector
b. Empower the 'hidden' health care system by providing powerful tools for patient-centered health: e.g. Microsoft Health Vault (http://www.healthvault.com/) and Googles' interest in consumer health promotion and care. Also, see the Canadian Association for People-Centred Health (CAPCH) website www.capch.ca
c. Have a 'constructive' national debate on the 'hot' issues of enhancing private sector investments and involvement, allowing practitioners to work in both public and private sector – but with regulations to assure access and principles of the Canada Health Act
d. Approximately 70% of Canadian health expenditures come from public sources, with the rest paid privately (both through private insurance, and through out-of-pocket payments). The extent of public financing varies considerably across services. For example, approximately 99% of physician services, and 90% of hospital care, are paid by publicly funded sources, whereas almost all dental care is paid for privately.

4) Global – Local integration

a. Following the lead in other sectors, examine ways to provide health care and health promotion services through the global market (globalization)
b. Address cultural diversity in health status and service needs

5) Technology: ICT, Genomics, Nanotechnology, Robotics

a. "Link sexy science with simple prevention" advocated Dr. Abdallah Daar as a key way to realign incentives to support prevention. A good example is genomic evidence (genetic screening) for identifying people and populations that have a high predisposition for Type II diabetes.
b. e-health is the use of information and communications technology, especially the Internet, to improve or enable health and healthcare
c. Focus on citizen engagement by providing access to their electronic health record (EHR) and web-based decision support tools for managing care of family member and access to health promotion services.

Next Steps

Given our initial work on articulating the five Alignment Principles for the BIG Idea, a key step will be to apply and test them with major implementation opportunities for York's Faculty of Health:

1. Creating an integrative curriculum based on the BIG Idea for the 4 schools in the Faculty of Health: Nursing, Psychology, Kinesiology, Health Policy & Management
2. Designing an innovative Medical School for York University that builds on and integrates with the Faculty of Health, as well as other Faculties and community partners
3. Building a network of teaching institutions in the GTA and York Region, ranging from teaching hospitals, primary care, community and public health organizations, and the Central LIHN itself
4. Co-creating with the Schulich Executive Education Center of a joint program on 'Leadership for Improving Performance through the Healthy Workplace' that will be targeted to private sector, public sector and healthcare settings (e.g. health of the nursing workforce in large hospitals)
5. Empower citizens and patients in the GTA and York Region with people-centered eHealth tools for health promotion and care, in collaboration with the Central LHIN planning and system integration
6. Building a network of international partner institutions for global health education and research.

Elevator Talk: Post Script

"Thanks for sharing this ride as we reach the ground floor. So, what do you think about the BIG Idea. Will you join me and colleagues on this bold venture for redesigning and integrating prevention and health care for the 21st century?"

To quote Tommy Douglas:

"Only through the practice of preventive medicine will we keep the costs from becoming so excessive that the public will decide that Medicare is not in the best interests of the people of the country."