Michael M. Rachlis MD MSc FRCPC

Health Policy Analysis Telephone (416) 466-0093 Facsimile (416) 466-4135 Website: <u>www.michaelrachlis.com</u> E-mail michaelrachlis@rogers.com 13 Langley Avenue Toronto, Ontario Canada M4K 1B4

September, 2007

Medicare: Facts, Myths, Problems, Promise. Edited by Greg Marchildon and Bruce Campbell. Published by James Lorimer and Company Ltd. Toronto 2007. (Copies available through: <u>http://www.policyalternatives.ca/publications/reports/medicare</u> *IV Health Care Reforms: Pharmacare, Home, Community, and Primary Care* Completing the Vision: Achieving the Second Stage of Medicare

Executive summary

Introduction

Today all Canadians are concerned about the state of Medicare. Recent international surveys show that Canadians wait longer than most others for family doctor appointments, emergency room service, specialist appointments, and elective surgery. The twenty to thirty percent of Canadians who never wanted Medicare now say, "We told you so. This government health plan wasn't ever going to work."

Few Canadians know that the original vision of Medicare went well beyond public payment for the old system. The original vision of Medicare included new ways of delivering care. But, as then Saskatchewan Premier Tommy Douglas realized in the 1950s, this vision would have to be implemented in two stages.

Medicare's original vision in Saskatchewan

Saskatchewan led the rest of the country and the continent with its health policy. Before Tommy Douglas became premier in 1944, the province already had a thriving municipal doctor program, provided universal care for patients with tuberculosis, and had established Canada's first cancer control agency. After his victory in 1944, Douglas appointed Dr. Henry Sigerist, an internationally known Johns Hopkins professor of medicine to review the province's health system. Sigerist recommended the establishment of district health regions to which would include hospital and medical care, diagnostics, public health, and home care.

Saskatchewan established the Health Services Planning Commission to continue planning and facilitate implementation of the Sigerist report's conclusions. Southwestern Saskatchewan was keen to move and on January 1, 1946, the Swift Current Health Region was established, providing universal hospital and medical care.

The Swift Current Region model doesn't spread

However despite the popularity of the Swift Current plan with local doctors and the initial positive reviews from Canadian organized medicine, opposition from doctors in other parts of the province and country prevented the spread of the Swift Current model. Eventually the Saskatchewan provincial government, led by Douglas as Premier, moved ahead with Medicare's first stage, providing insurance to people when they got sick. In 1947, Saskatchewan implemented universal hospital insurance and in 1962, medical insurance. However, over 90 per cent of the province's doctors went on strike, refusing to see patients even in an emergency. Eventually, Saskatchewan's doctors essentially settled for what the government had been offering.

Canadian governments were shaken by the bitter strike and were loathe to have a repeat. As a result, Canadian governments did little to challenge physicians on the way health care services were organized. There were some new models of care developed based on group practice and integration of public health. The Saskatchewan community clinics and the Sault Ste. Marie Community Group Health Centre were evaluated in the 1960s and 1970s and shown to have lower overall health care costs because their patients spent 20-25% fewer days in hospital.

In general Medicare has been good for Canadians

The first stage of Medicare has been very good to Canadians. Up until the late 1950s, Canadians and Americans had similar health status and similar health care systems with similar costs. Now Canadians are healthier and spend much less on health care. Despite the world's highest health care spending, nearly 60 million Americans either have no insurance or live with someone who lacks coverage, and tens of millions have such bad coverage that health care bills bankrupt half a million every year. And, Medicare has been good for Canadian business by reducing manufacturers payroll costs by up to \$6 per hour per employee.

But, Canada's health system has run into predictable problems because of the failure to implement the Second Stage of Medicare

When Canadians first started debating Medicare one hundred years ago, we were a young country and most health problems were acute. However, today our main health problems are chronic diseases in an aging population. And because Canadian physicians have not integrated their practices with each other or with the rest of the health system, Canadians with chronic diseases frequently develop complications which could have been prevented with better follow up.

Medicare's Achilles' heel: Long waits for care

Compared with other wealthy countries, Canada has some of the longest waits for primary health care, medical specialists, hospital emergency rooms, and elective surgery. Douglas noted in his day that needless "ping-ponging" between different specialists and diagnostic tests caused many delays. Now the waits are longer because there are more specialties, more tests available, and because modern practices won't allow patients into hospital just to have all their tests and consultations at once. When care processes are updated using the original vision of Medicare, waits plummet. The Saskatoon Community Clinic sees their patients the day they want to be seen and the Saskatchewan Health Quality Council has taken this innovation to 25% of the province's primary health care practices. The Hamilton Shared Care Mental Health Program integrates 145 family doctors, 17 psychiatrists, 80 counsellors to provide primary health care-based mental health services to over 300,000 patients. The program increased the number of patients using mental health services by 1100% while simultaneous reducing referrals to the psychiatry specialty clinic by 70%.

Canadians should also have faster access to elective surgery. For example, the Alberta Bone and Joint Institute Pilot Project reduced wait times for artificial joints from 19 months to less than 11 weeks, all the way from family doctor referral right through to surgery. The key changes included creating orthopaedic surgery group practices.

The Second Stage of Medicare is coming but can we wait?

We have known the broad brush strokes for the Second Stage of Medicare since at least 1946 in Swift Current. The development of the quality agenda in health care has added a lot of detail to the sketch. And, there are more and more Canadian examples of these Second Stage programs with their attendant benefits to health and the health care system. If we could implement the Second Stage of Medicare we could improve the country's health, a lot, including the health of the people who provide care. While Medicare has problems, it's pretty clear that we can fix them all without charging clients or contracting out care to the lowest bidder.

Canada needs to complete Medicare's first stage by providing public coverage for pharmaceuticals, home care, and preventive dental services. But if we don't re-focus our health services on keeping people well, we will never be able to afford the First Stage. 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."

Introduction:

Today all Canadians are concerned about the state of Medicare. Recent international surveys show that Canadians wait longer than most others for family doctor appointments, emergency room service, specialist appointments, and elective surgery.¹ The twenty to thirty percent of Canadians who never wanted Medicare now say, "We told you so. This government health plan wasn't ever going to work."

Few Canadians know that the original vision of Medicare went well beyond public payment for the old system. The original vision of Medicare included new ways of delivering care. But, as Tommy Douglas reminded us in the SOS Medicare Conference in November 1979, this vision would have to be implemented in two stages – the first stage was to remove money as a barrier to access but the second, more difficult, stage would be "to alter our deliver system" in order "to reduce costs and put an emphasis on preventative medicine.

Medicare's Original Vision in Saskatchewan

Saskatchewan led the rest of the country and the continent with its health policy.² Before Tommy Douglas became premier in 1944, the province already had a thriving municipal doctor program, provided universal care for patients with tuberculosis, and had established Canada's first cancer control agency. Just months after Douglas was elected premier, the province became the first jurisdictions in North America to cover all cancer diagnosis and treatment.

After his victory in 1944, Douglas appointed Dr. Henry Sigerist, an internationally known Johns Hopkins professor of medicine, to review the province's health system.³ Sigerist recommended the establishment of district health regions to focus on preventive medicine. The district would include hospital and medical care, diagnostics, public health, and home care. To ensure the focus was on prevention, Sigerist recommended that the medical officer of health head up the health region.

Saskatchewan established the Health Services Planning Commission to continue planning and facilitate implementation of the Sigerist report's conclusions. Southwestern Saskatchewan was keen to move, and on January 1, 1946, the Swift Current Health Region was established. On July 1 of that year, it began providing universal hospital and medical care.⁴

The Swift Current Region financed and provided hospital and physicians' care, laboratory and radiology services, home care, public health, and children's' dental services. Its efforts drew broad praise from local citizens and leading physicians in Saskatchewan.⁵ The Swift Current region went from having a high level of infant mortality to the lowest in the province by 1965.⁶ Even Dr. Arthur Kelly, deputy secretary of the Canadian Medical Association, was effusive with praise in a 1948 Canadian Medical Association article, characterizing the region as:⁷

here is a successful experiment in the large scale provision of medical care, courageously applied, efficiently managed and remarkably free of attempts to make the facts fit preconceived ideas, financial or otherwise.

The key factors associated with the Swift Current Region's success were:

- **Improved coordination of health care delivery** focused on prevention through a local integrated health region: The region funded and organized a comprehensive package of services including hospital and physician care, diagnostic services, home care, public health, and children's dental services.
- **Prepaid funding:** Services were available to the public on a universal basis, with little or no charge to users.
- **Group medical practice:** The doctors were in private practice, but the regional medical leadership, including the medical officer of health, exerted significant influence in standards of practice and utilization. The medical office of health and public health nurses worked in tandem with the physicians to deliver preventive services.
- **Democratic community governance** of health care delivery by a locally elected board: The twelve Swift Current board members represented the region's eighty-seven municipalities. Community governance would ensure health care remained responsive and customized to the priority needs of the local population.

The Swift Current Region Model Doesn't Spread

However, despite the popularity of the plan with local doctors and the initial positive reviews from Canadian organized medicine, opposition from doctors in other parts of the province and country prevented the spread of the Swift Current model.⁸ Organized medicine's biggest concern was that the profession did not want to negotiate with local boards, but rather the province.⁹

Eventually the Saskatchewan provincial government, led by Premier Douglas, moved ahead with Medicare's first stage: providing insurance to people when they got sick. In 1947, Saskatchewan implemented universal hospital insurance. When Saskatchewan launched its medical insurance plan on July 1, 1962, over 90 percent of the province's doctors went on strike, refusing to see patients even in an emergency.¹⁰ Eventually, Saskatchewan's doctors essentially settled for what the government had been offering. The settlement of the 1962 Saskatchewan physicians' strike is generally seen as a victory for the government and the birth of Medicare in Canada. However, events belie this interpretation.

In the longer term, Canadian governments were collectively shaken by the bitter 1962 doctor's strike and were loath to have a repeat. The federal government did implement a national hospital insurance plan in 1957 and a national medical insurance plan in 1968. In 1969, the country's deputy ministers of health asked the University of Toronto's Dr. John Hastings to write a report on the reorganization of medical practice and primary health care as it moved to public payment. Hastings' 1972 report recommended a similar system to that suggested by Sigerist twenty-seven years earlier: group medical practice, non-fee-for-service payment, and integration with public health and social services.

Despite a positive reception from nursing groups, public health associations, and several provinces, there was firm opposition from the medical profession. The health

system stayed pretty much the same for twenty-five years after Dr. Hastings's report. Canadians had first-dollar coverage for hospital and physicians' services, but the delivery system still looked like the 1950s. Almost all physicians are in private practice, billing the provincial Medicare plans on a fee-for-service basis. There is little group practice or the use of inter-disciplinary teams.

But the Model Does Work Where it is Implemented

There were some new models of care developed. In Saskatchewan, the 1962 battle for Medicare led to the establishment of several cooperative community clinics. The Saskatoon Community Clinic now employs 150 staff and provides medical services to over 20,000 patients and community-based preventive services to thousands of others.¹¹ The clinic has pioneered improvements in access and chronic disease management that are being implemented province wide through the Saskatchewan Health Quality Council. A 1981 study of the Saskatoon Community Clinics found that the community clinic patients had 17 percent lower overall costs and 31 percent fewer days in hospital.⁵

In 1964, a Sault Ste. Marie Community Group led by the United Steelworkers of America opened the Group Health Centre.¹² The centre now has over 60,000 patients, nearly 70 doctors, 110 nurses, and 50 other health professionals. Group Health, as it is called, has been a font of innovation for over 40 years. Group Health has had a comprehensive electronic medical record since 1997¹³ and has been cited for its innovative care in access and chronic disease management.¹⁴ Studies from the 1960s and 1970s found that the Sault Ste Marie Group Health Association Clinic had lower overall health care costs because patients spent 20 to 25 percent fewer days in hospital.^{15,16,17}

In the United States and Canada, remote mining and forestry companies have typically provided their own medical services. In the United States, "prepaid group practice," as the plans were called, grew in a major fashion during the 1930s. Studies over the years have concluded that prepaid group practices such as the Group Health Cooperative of Puget Sound and Kaiser-Permanente set standards of excellence for health care system performance. In the most expensive health services research project ever funded, the Rand health insurance study found the costs for Group Health Cooperative patients were 25 percent less than those seeing fee-for-service doctors — due almost entirely to the fact that Group Health patients spent 40 percent fewer days in hospital.^{18,19}

The First Stage of Medicare has been Good for Canadians

The first stage of Medicare has been very good to Canadians. Up until the late 1950s, Canadians and Americans had similar health status and similar health care systems, with similar costs. Now Canadians live 2.5 years longer and our infant mortality rate is 23 percent lower.²⁰ In 2004, the United States spent 15.3 percent of its gross domestic product (GDP) on health care, and Canada spent 9.9 percent. Half of the difference in expenditures is because of the much higher administrative burden of the mainly private US system.²¹ Despite having the world's highest health care spending, nearly 60 million Americans either have no insurance or live with someone who lacks coverage,²² and tens of millions have such bad coverage that health care bills bankrupt half a million Americans every year.²³

And Medicare has been good for business in Canada by picking up the tab for most health care costs. Our manufacturers have an \$8 per hour per employee advantage over their American competitors.²⁴ Medicare keeps hundreds of thousands of our best-

paying jobs in this country. By any standard we have done well by adopting Tommy Douglas's first stage of Medicare. But, as Douglas predicted, our health system has developed problems.

Failure to Implement the Second Stage of Medicare

Medicare's founders foresaw two-fold benefits when they prescribed more prevention in the second stage of Medicare. First, the second stage of Medicare would promote better health and well-being among Canadians. Second, it would ensure the long-term sustainability of the health care system. In 1982, Tommy Douglas told a Montreal audience: ²⁵

All these programs should be designed to keep people well — because in the long run it's cheaper to keep people well than to be patching them up after they are sick.

Why Completing Medicare's Original Vision is Urgent and Imperative

It is urgent and imperative to correct this situation. The dangers of not moving to the second stage of Medicare are becoming more and more apparent. When Canadians first started debating Medicare a hundred years ago, we were a young country and most health problems were acute. Today, our main health problems are chronic diseases in an aging population. Almost 80 percent of Canadians over the age of sixty-five suffer from a chronic condition. Of those, about 70 percent suffer from two or more chronic conditions.²⁶ At least 60 percent of health care costs are due to chronic diseases.²⁷ And, compared with other countries, our health system does a poor job of keeping people with chronic disease healthy.²⁸

Most chronic diseases could be prevented altogether. We could prevent over 80 percent of cases of coronary heart disease²⁹ and type-2 diabetes,³⁰ and over 85 percent of cases of lung cancer and chronic obstructive lung disease (such as emphysema).³¹ If the potential for prevention could be translated into reality for these four conditions, approximately 2,900 hospital beds could be freed up in Ontario alone.³²

Financial factors are another driving force for change. Tommy Douglas always said that focusing on prevention would make Medicare more sustainable. And a growing body of evidence indicates Douglas was right.³³ For example, a recent Alberta after-care program for congestive heart failure patients leaving hospital reduced future hospital use by 60 percent, with \$2,500 in overall net cost savings per participant.³⁴ Home care nurses ensured that patients were taking their medications, were eating properly, and making other lifestyle changes. And the regular follow-up ensured that corrective measures were taken quickly if a patient began to deteriorate.

Medicare's Achilles' Heel: Long Waits for Care

Compared with other wealthy countries, Canada has some of the longest waits for primary health care, medical specialists, hospital emergency rooms, and elective surgery.³⁵ Douglas noted in his day that needless "ping-ponging" between different specialists and diagnostic tests caused many delays.³⁶

I have a good doctor and we're good friends. And we both laugh when we look at the system. He sends me off to see somebody to get some tests at the other end of town. I go over there and then come back, and they send the reports to him and he looks at them and sends me off some place else for some tests and they come back. Then he says that I had better see a specialist. And before I'm finished I've spent, within a month, six days going to six different people and another six days going to have six different kinds of tests, all of which I could have had in a single clinic.

Now the waits are longer because there are more specialties, more tests available, and because modern practices won't allow patients into hospital just to have all their tests and consultations at once.³⁷ All these reasons demonstrate the urgent need to swiftly shift to the second stage of Medicare. If we don't do a better job preventing the preventable, the system will collapse from the strain — and many Canadians will suffer needlessly in the process.

Interpreting the Second Stage of Medicare for the Twenty-first Century

Tommy Douglas and the history of Medicare in Saskatchewan has given us inspiration for the second stage of Medicare, but how do we translate that into a vision of Medicare for the twenty-first century? Looking back, it seems that he was decades ahead of his time in calling for what we now call the "Quality Agenda" in health care. For example, the Health Council of Canada³⁸ noted in its 2006 report:

Are we providing the safest, most suitable care? Are we investing enough in prevention? Are we reducing inequalities in health? The answer to these questions is no, not yet. But we could. It is the Council's belief that we already have strong evidence and enough experience to pursue a quality agenda.

Over the last fifteen years, reports from many countries on hospital complications have spurred interest in the quality of care.³⁹ A 2004 Canadian study showed similar results to those in other countries. One Canadian in fourteen suffers a complication while in hospital, and over one-third of these could be prevented.⁴⁰ Somewhere between 9,000 and 24,000 Canadians die annually from preventable complications of their hospital care. That's 5 to 10 percent of all deaths.

And thousands of Canadians die every year because of poor quality health care outside of hospital, especially from medication complications and inadequate chronic disease management and prevention. For example, about one-quarter of older women are being prescribed sedatives, contrary to clinical practice guidelines.⁴¹

Of course, this isn't the fault of any one professional, one profession, or one organization. Most countries face similar problems, although some do better and some do worse. Many jurisdictions have developed quality initiatives. There are health quality councils in Saskatchewan, Alberta, and Ontario. Each of these councils, as well as others in other countries, have developed principles for health system renewal.^{42,43, 44,45} Their work was used as the basis for the list of principles for the second stage of Medicare (See Box). The principles are divided into essential ones, which are what we want and the

instrumental ones, which help us get there. This paper addresses the essential principles. Other speakers at that the meeting dealt with instrumental ones.

The Principles for the Second Stage of Medicare

Essential Principles — What We Want

- 1. **Population Health Focus:** There should be a determined effort to continuously improve the overall health of the population.
- 2. **Equitable:** There should be continuing efforts to reduce disparities in the health of those groups who may be disadvantaged by social or economic status, age, gender, ethnicity, geography, or language.
- 3. **Client-Centred:** Client-centred care respects individuality, ethnicity, dignity, privacy, and information needs of each clients and the client's family. That respect should pervade the health system. Clients should be in control of their own care.
- 4. **Effective:** The best science and evidence should be used to ensure care is the best, most appropriate possible. Innovations should also be based on best evidence, whether they are new ways of coordinating care, preventing disease, delivering service, or using technology.
- 5. Accessible: Clients in need should get timely care in the most appropriate setting. The system should continuously reduce waits and delays.
- 6. **Safe:** People should not be harmed by the care that is intended to help them. The system should monitor and continuously reduce adverse events.

Instrumental Principles — How We Will Get There

- 7. **Efficient:** There should be continuing efforts to reduce waste, including waste of supplies, equipment, time, ideas, and health information.
- 8. Accountable: The system should be highly accountable to clients, their families, and funders. There should be clear quality objectives for all health service providers. The objectives and funding should be aligned at the provincial, regional, and local levels to ensure clients and families experience fully integrated care.
- 9. **Appropriately Resourced:** The health system should plan for appropriately trained human resources; provide a safe and satisfying environment for their work and provide sufficient facilities, instruments, and technology to support productive and effective care.
- 10. **Non-Profit Delivery:** Health care is fundamentally different from commercial good and services. Markets simply are not designed to deal effectively with health care, which is a social function. Health care providers provide the best care when they work in teams, not as competitors.

What Would the Second Stage of Medicare Look Like?

Essential Principles — What We Want

1. Focused on population health

What's wrong with our current approach?

Our current approach to health care and health policy is based upon treating illness after it occurs. We miss opportunities for prevention. Implementing the second stage of Medicare could avert thousands of premature deaths a year and the suffering of tens of thousands of others.

Why do we have this problem?

Our health system was largely designed to treat acute illness. Federal legislation only requires the provinces to cover hospitals' and physicians' services. Our system offers increasingly expensive treatments, but our major health problems continue to be chronic diseases, which cannot be cured but often can be prevented.

Most health problems are related to social, environmental, occupational, economic, and other factors. Governments tend to deal with these health determinants in an uncoordinated fashion. Our country has little in the way of planning for health or social goals as compared with economic ones. If the health system is going to help make Canada a healthier place, it will need to work with other sectors on the non-medical determinants of our health.

How do we fix the problem?

We need national and provincial health plans to guide the redesign of the health care system and the way governments make decisions that affect our health. For example, Quebec has coordinated its social policy around a series of health goals since 1987. Since 1998, Quebec has had a National Institute of Public Health, which, among other tasks, is responsible for developing a provincial health plan based upon these goals.⁴⁶

Saskatchewan developed the Human Services Integration Forum to coordinate health and social planning across government departments. It is led by a Steering Committee, with senior officials representing seven provincial government departments and the Cabinet Office.

Then provinces need to help health regions work with other sectors at regional and local levels. For example, Saskatchewan's Human Services Integration Forum integrates its work with ten Regional Inter-sectoral Committees (RICs). The committees include representatives from various provincial and federal government departments, municipalities, regional health authorities, housing authorities, educational institutions, tribal councils, police, and Métis organizations.

Finally, we need health organizations to engage their communities to improve the determinants of health. For example, The Toronto Regent Park Community Health Centre wanted to ensure that the community's children had the opportunity to become the health centre's future administrators, doctors, and nurses. But the community's high school drop-out rate was very high and few children went on to university. In response, the Community Health Centre keyed the development of an award-winning Pathways to

Education program which has reduced the community's drop-out rate from 56 percent to 14 percent, considerably lower than the city average.⁴⁷

2. Equitable

What's wrong with our current approach?

Our health system is largely focused on treating people who walk in the door, not on ensuring that people get the care they need. Unfortunately, the people least likely to get the regular health care they need are the most likely to be sick. As a result, there are very significant disparities in health among different Canadians.⁴⁸

Health disparities have an important impact on the health system. For example, lower-income Canadians are substantially sicker than upper-income Canadians and consequently use twice the number of health care services.⁴⁹ In 2004, the Federal/Provincial/Territorial Health Disparities Task Group noted that approximately 20 percent of health care spending was due to disparities among different income groups.⁵⁰

Why do we have this problem?

Certain groups are more susceptible to illness because of their non-medical determinants of health.^{51,52,53} However, disparities in access to the health care system do play a role in disparities in health. In general, the health care system and the non-medical determinants of health interweave with each other to form a complex web of causation.⁵⁴ But the Federal/Provincial/Territorial Health Disparities Task Group noted that "the health sector has an important role to play in mitigating the causes and effects of other determinants of health through interventions with disadvantaged individuals, populations and communities."

How do we fix the problem?

We need to ensure that we are continuously monitoring and reducing disparities in health and health care. Given that disparities in health arise from a complicated interplay of factors, most of which are not under the control of the health care system, we need to clarify what the system can do itself and where it needs to recruit help.

The Saskatoon Health Region has identified significant disparities in health and health care access within its catchment area.⁵⁶ For example, there are sixteen times as many suicide attempts in the poorest neighbourhoods than in the wealthiest, but only twice as many physician visits for mental health problems.

The Saskatoon Regional Intersectoral Committee (RIC) is co-chaired by the Health Region's vice-president for primary health care and the city's director of parks and recreation. In response to the health disparities research, the health region is working in concert with its RIC partners to develop innovative programs to tackle the disparities.⁵⁷ In March 2007, the province announced \$8 million in new spending targeted to the city neighbourhoods with the poorest health.⁵⁸

3. Client-centred

What's wrong with our current approach?

Clients should be in control of their own care to ensure that their health care journey meets their own values and expectations. However, clients don't even usually have the information they require to make decisions. The average client requires ninety seconds⁵⁹ to explain his problem, but the average doctor interrupts the average client in only about twenty seconds.^{60,61} As a result, physicians often do not have the complete information to assess their clients' problems, and clients are capable of fully informed decision making in less than 10 percent of physician visits.⁶² These problems are much worse for people with formal communications barriers, such as physical disabilities, cultural barriers, or lack of English language skills.^{63,64,65}

Why do we have this problem?

Our health system is based around providers, not clients. Up until recently there has been little provider training devoted to communication skills or to the concept of clients and families as partners in care. Some of these problems could be ameliorated if clients had access to a high-functioning team of professionals instead of the more typical focus on one doctor. Too much of our doctors' time is spent dealing with problems with which they have little training or expertise. Canadian family physicians are less likely to work in teams than those in other countries.⁶⁶

How do we fix the problem?

We need to involve clients in all aspects of their care and in health services planning. We need to ensure that we build in sensitivity and tolerance to Canada's growing ethnic, racial, and religious diversity as we re-design our health system.

During the 1990s, the London Intercommunity Health Centre developed a highly effective program to deal with diabetes in London's large Latin American population.⁶⁷ The centre has found that most of the time, when a client's diabetes is out of control, it's due to non-medical factors. So they have a social worker and two community health workers who are part of their team. They help their clients deal with a myriad of problems, from illiteracy to landlord tenant problems.

Helping clients with their underlying determinants of health has dramatically improved their diabetes results. As of June 2006, the Centre's Latino diabetes self-management clinic showed a 22 percent improvement after program intervention, indicating excellent diabetes control.⁶⁸

4. Effective

What's wrong with our current approach?

Poor quality outcomes are a result of care that isn't based on the best scientific evidence. It often takes fifteen to twenty years after an innovation's development before it becomes routine practice. A number of studies have shown that the management of chronic disease is contrary to professionally-endorsed clinical practice guidelines.^{69,70}

Why do we have this problem?

We're not using the best evidence to inform practice because:

- The evidence doesn't get to where it needs to go. The doctor doesn't have the information at the bedside. The nurse doesn't have it at the client's home.
- The health providers know the evidence, but there is a system barrier that prevents them from using it. Family doctors know they should be doing a better job with chronic disease; but few family doctors work with other professionals like nurses, therapists, and others, and fewer have electronic health records.

How do we fix the problem?

We have to follow the evidence to develop services, and we need to implement electronic health records. We also have to implement high-functioning inter-disciplinary teams, especially in primary health care. For example, Ontario has developed an internationally recognized strategy for dealing with stroke, which straddles the spectrum of services all the way from prevention to rehabilitation. It is based on evidence each step of the way. As a result, Ontarians have the world's best access to thrombolytic or clot-busting therapy for stroke. Eleven percent of Ontario stroke patients get clot busting drugs versus 3 percent in the United States and most other parts of the world.⁷¹

5. Accessible

What's wrong with our current approach?

Canadians are more likely than those in most other countries to report long waits for family doctors, emergency rooms, specialist appointments, and elective surgery.⁷²

Why do we have this problem?

Canada has fewer doctors per population than almost any other wealthy country, and we are at the low end for hospital beds and diagnostic equipment.⁷³ However, health systems with fewer resources than ours can run smoothly with few waits and delays. One of the big problems in primary health care is the lack of inter-disciplinary care compared with other jurisdictions. Doctors are seeing a lot of patients who would be better off seeing other professionals or managing their own care.

One of the reasons many Canadians face long waits for specialist visits is that the main format hasn't changed in over a hundred years. In most of Canada, specialists schedule their clients for one-hour appointments, after the family doctor has made the referral. But sometimes the visit could have been replaced by a five-minute phone call between the family doctor and the specialist. In other cases, the client and family might need a half-day assessment from a multi-disciplinary specialist team.

How do we fix the problem?

We need to focus on clients' needs and use some queuing techniques to ensure timely access. Toronto's Access Alliance Community Health Centre⁷⁴ improved the access to its maternal child programs for new immigrants and refugees by literally taking services to clients. The centre works closely with settlement agencies to identify the Toronto neighbourhoods into which new immigrants and refugees are moving. Then Access Alliance uses existing community ethno-cultural networks to recruit and hire peer outreach workers. The outreach workers and staff from the CHC deliver up to twenty

education programs, including six on parenting. They also facilitate well child and women clinics conducted by the CHC's nurse practitioners and dietitians in community settings.

The Saskatoon Community Clinic, Toronto's Rexdale and Lawrence Heights Community Health Centres, and Cambridge's Grandview Medical Centre have implemented "Advanced Access" to eliminate waits and delays.⁷⁵ The Saskatchewan Health Quality Council has taken this innovation to 25 percent of the province's primary health care practices.⁷⁶

And we could get needed specialty care quickly, as well. In Hamilton, the HSO Mental Health Program integrates 145 family doctors, 17 psychiatrists, 80 counsellors who are based with the family doctors (most of whom are social workers), and over 300,000 clients.^{77,78} As a result of the program, 1,100 percent more clients have been seen with mental health problems in primary health care, while referrals to the psychiatry specialty clinic have simultaneously dropped by 70 percent. All clients are given standardized assessments, and the program has documented improvements in depression scores, as well as general health and functioning.

Finally, we could get faster access to elective surgery. For example, the Alberta Bone and Joint Institute Pilot Project⁷⁹ reduced wait times for artificial joints from nineteen months to less than eleven weeks, all the way from family doctor referral right through to surgery.

When you put it all together, we shouldn't have to spend a lot more money in Canada to get some day access to primary health care, routine specialty care within one week, and elective surgery in a month.

6. Safe

What's wrong with our current approach?

One in fourteen Canadian hospital clients suffers a complication while in hospital, resulting in up to 24,000 deaths every year from preventable complications. Thousands more die because of poor-quality health care outside of hospital, especially from medication complications.^{80,81}

Why do we have this problem?

The health care system has an outdated view of safety.⁸² Other sectors such as transportation have updated their culture to include encouraging disclosure of accidents and near-accidents by offering immunity if the reporting is done promptly. Accidents are investigated to identify systemic factors, not to single out and punish individuals.⁸³

The lack of electronic information systems is a key risk factor for clients. To quote the US Institute of Medicine, "In a safe system, clients need to tell care-givers something once." One of the major complaints by Canadian clients is that they repeatedly have to tell the same stories to many different providers. And if clients are incapable of giving this information, the care team won't have it. This risky situation becomes even more dangerous when a client moves from one health care setting to another, for example, from the operating room to the intensive care unit, or from hospital to home.

How do we fix the problem?

We need to ensure that we are using effective services and that there are safeguards in place when things do go wrong. Information systems are a key facilitator for safety. Dr. David Chan and other McMaster University colleagues developed OSCAR, Open Source Clinical Application Resource, an open-source, electronic health record.^{84,85} Dr. Chan has recently assisted a group of Toronto agencies that deal with the homeless establish an integrated record which will be available online to whatever provider requires the information.

The Client Access to Integrated Services and Information (CAISI) Project aims to reduce the risks of chronic homelessness by enhancing the integration of care between agencies at the individual and population levels, using an electronic information system.⁸⁶ Providers will not have to search through paper charts or telephone a dozen other agencies to get key information and keep their clients safe.

The Second Stage of Medicare is Coming, But Can We Wait?

We have known the broad brush strokes for the second stage of Medicare since at least 1945. The development of the quality agenda in health care has added a lot of detail to the sketch. And there are more and more Canadian examples of these second stage programs with their attendant benefits to health and the health care system. If we could implement the second stage of Medicare, we could significantly improve the health of Canadians, including the health of the people who provide care. While Medicare has problems, it's pretty clear that we can fix them all without charging clients or contracting-out care to the lowest bidder.⁸⁷

But, while there have been many improvements in Medicare, the pace is slow and our public discourse is plagued by the endless debate about privatization. The media have a strong bias against "good news," so they provide almost no coverage of second stage reforms. Google records 300 times as many "hits" for Vancouver orthopedic surgeon Dr. Brian Day than for the Alberta Bone and Joint Institute. Dr. Day offers quicker artificial joint implants for cash on the barrel. But he would have no customers if the Alberta Institute's pilot project were spread across the country.

Canada needs to complete Medicare's first stage by providing public coverage for pharmaceuticals, home care, and preventive dental services. But if we don't refocus our health services on keeping people well, we will never be able to afford the first stage. 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."

Endnotes:

¹ C. Schoen, R. Osborn, P,T. Huynh, et al., "Taking the Pulse of Health Care Systems: Experiences with Health Problems in Six Countries," Health Affairs 10 (2005):w5-509-w5-525.

Canadian Health Insurance System (McGill Queens Press: Montreal, 1978), 244; C.D. Naylor, Private Practice, Public Payment: Canadian Medicine and the Politics of Health Insurance (McGill-Queens University Press: Kingston and Montréal, 1986), 138-9.

⁴ For more details on the Swift Current Region see: http://scaa.usask.ca/gallery/medicare/en_swiftcurrent.php. Accessed 10 April 2007; and also see: Houston, Steps on the Road to Medicare, 77-88.

⁵ M. Taylor, Health Insurance and Canadian Public Policy: The Seven Decisions that created the Canadian Health Insurance System (McGill-Queen's Press: Montreal, 1978), 251-2; and Houston, Steps on the Road to Medicare, 85.

⁶ Houston, Steps on the Road to Medicare, 85.

⁷ A.D. Kelly, "The Swift Current Experiment," *Canadian Medical Association Journal* 58 (1948): 506–11. ⁸ Taylor, Health Insurance and Canadian Public Policy, 252; Naylor, Private Practice, Public Payment, 191.

⁹ Taylor, Health Insurance and Canadian Public Policy, 252; Naylor, Private Practice, Public Payment, 178-9, 191.

¹⁰ This section draws from Taylor, *Health Insurance and Canadian Public Policy*, 239–330; Naylor, *Private Practice, Public Payment,* 176–213. ¹¹ See: <u>http://www.saskatooncommunityclinic.ca/</u>. Accessed 15 June 2007.

¹² See: http://www.ghc.on.ca/home.html. Accessed 15 June 2007.

¹³ D. Murray, "The Group Health Centre Model – working to improve continuity, comprehensiveness and responsiveness in primary care," presentation to the Research Group on Equity of Access and Organization on Primary Health Care Services. Found at: http://www.greas.ca/publication/pdf/davidmurray.pdf. Accessed 2 November 2006.

¹⁴ For example, Group Health was given an award for innovation at the Ontario Ministry of Health and Long-term Care's Expo 2007. See: http://www.ghc.on.ca/news/news.html?ID=59. Accessed 20 June 2007. ¹⁵.J.E.F. Hastings, F.D. Mott, A. Barclay, D. Hewitt, "Prepaid group practice in Sault Ste. Marie, Ontario:

Part I: Analysis of utilization records," Medical Care 11 (1973): 91-103.

¹⁶F.D. Mott, J.E.F. Hastings, and A. Barclay, "Prepaid group practice in Sault Ste. Marie, Ontario. Part II: Evidence from the household survey," Medical Care 11 (1973): 173-88.

¹⁷G.H. DeFriese, "On paying the fiddler to change the tune: Further evidence from Ontario regarding the impact of universal health insurance on the organization and patterns of medical practice," Millbank Memorial Fund Quarterly 53, no. 2 (1975): 117-48.

^{18.} W.G. Manning, A. Leibowitz, G.A. Goldberg, W.H. Rogers, and J.P. Newhouse, "A controlled trial of the effect of a prepaid group practice on the use of services." New England Journal of Medicine 310 (1984): 1505–10.

¹⁹J.E. Ware, W.H. Rogers, A.R. Davies AR, et al., "Comparison of health outcomes at a health maintenance organization with those of fee-for-service care," Lancet i (1986): 1017-22.

²⁰ Organisation for Economic Cooperation and Development, "Frequently requested health statistics 2006," found at: http://www.oecd.org/dataoecd/20/51/37622205.xls. Accessed 21 June 2007.

²¹ S. Woolhandler, T. Campbell, and D.U. Himmelstein, "Costs of health care administration in the United States and Canada," New England Journal of Medicine 349 (2003): 768-75.

²² US Institute of Medicine, "Health insurance is a family matter" (18 September 2002), http://www.nap.edu/catalog/10503.html?onpi_newsdoc09182002 (accessed November 17, 2003).

²³ A. Wordsworth, "Medical bills main culprit in bankruptcies: US study," National Post (27 April 2000).

²⁴ B. Purchase, "Health care and competitiveness," background paper for the National Health Policy Summit (Ottawa, 1996).

²⁵ T.C. Douglas, "We must go forward," in Medicare The Decisive Year, ed. Lee Soderstrom (Canadian Centre for Policy Alternatives: Ottawa, 1984).

² C.H. Houston, *Steps on the Road to Medicare* (McGill-Queen's Press: Montreal, 2002).

³ M. Taylor, Health Insurance and Canadian Public Policy: The Seven Decisions that created the

²⁶ H. Gilmour and J. Park, "Dependency, chronic conditions, and pain in seniors," *Health Reports* supplement1 (2005): 21–31. Found at: <u>http://www.statcan.ca/english/freepub/82-003-SIE/2005000/pdf/82-003-SIE/20050007443.pdf</u>. Accessed 2 November 2006.

²⁷ There is no recent comprehensive study of the cost of chronic disease in Canada but a recent study in Nova Scotia concluded that 60 percent of the province's health care costs were for chronic diseases. R. Colman, K. Hayward, A. Monette, et al., "The cost of chronic disease in Nova Scotia. GPI Atlantic." Found at: <u>http://gov.ns.ca/health/downloads/chronic.pdf</u>. Accessed 2 October 2006.

In 2004, the US Centers for Disease Control concluded that persons with chronic conditions consumed 75 percent of the costs of the system: http://www.cdc.gov/nccdphp/burdenbook2004/. The higher figures could be due to some of the persons with chronic conditions developing unrelated acute problems while the lower figure may be related to the exclusion of acute problems (such as falls in the elderly), which are often related to chronic problems.

²⁸ C. Schoen, R. Osborn, P.T. Huynh, et al., "On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries," *Health Affairs* 11 (2006): w555–w571. Found at: <u>http://content.healthaffairs.org/cgi/content/full/hlthaff.25.w555/DC1</u>. Accessed 2 November 2006.

²⁹ M.J. Stampfer, F.B. Hu, J.E. Manson, et al., "Primary prevention of coronary heart disease in women through diet and lifestyle," *New England Journal of Medicine* 343 (2000): 16–22.

³⁰ F.B. Hu, J.E. Manson, M.J. Stampfer, et al., "Diet, lifestyle, and the risk of type 2 diabetes mellitus in women," *New England Journal of Medicine* 345 (2001): 790–7.

³¹ R. Doll, R. Peto, K. Wheatley, et al., "Mortality in relation to smoking: 40 years' observations on male British doctors," *British Medical Journal* 309 (1994): 901–11.

³² From tabulations constructed from data from the Canadian Institute for Health Information. Found at: <u>http://secure.cihi.ca/cihiweb/dispPage.jsp?cw_page=statistics_results_topic_hospital_e&cw_topic=Health</u> <u>percent20Services&cw_subtopic=Hospital percent20Discharges</u>. Accessed 10 November 2006. These conditions were responsible for 950,000 hospital days or roughly 2870 hospital beds (at 90 percent capacity).

³³ The 2001 Saskatchewan Royal Commission on Medicare chaired by long-time health administrator Ken Fyke noted: "Many attribute the quality problems to a lack of money. Evidence and analysis have convincingly refuted this claim. In health care, good quality often costs considerably less than poor quality." K.J. Fyke, "Caring for Medicare: sustaining a quality system," report of the Saskatchewan Commission on Medicare (Regina: The Commission, 2001).

³⁴ R. T. Tsuyuki, M. Fradette, J.A. Johnson, et al., "A multicenter disease management program for hospitalized patients with heart failure," *Journal of Cardiac Failure* 10 (2004): 473–80.

³⁵ C. Schoen, R. Osborn, P.T. Huynh, et al., "Taking the pulse of health care systems: Experiences with health problems in six countries," *Health Affairs* 10 (2005): w5–509–w5–525.

³⁶ Quote from speech by T.C. Douglas entitled "We Must Go Forward" in transcript of Canadian Centre for Policy Alternatives Conference proceedings entitled "Medicare: The Decisive Year" held on 12-13 November 1982 in Montreal. Copies of the 1982 conference proceedings may be obtained from the Canadian Centre of Policy Alternatives or the Canadian Health Coalition.

³⁷ For one thing, it's pretty dangerous to be in hospital if you don't really need to be there.
³⁸ Found at:

http://www.healthcouncilcanada.ca/en/index.php?option=com_content&task=view&id=70&Itemid=72. Accessed 9 April 2007.

³⁹ For examples, see the US Institute of Medicine, *Crossing the Quality Chasm: A New Health System for the 21st Century* (Washington, DC: National Academy Press, 2001).

⁴⁰ G.R. Baker, P, G. Norton, V. Flinthoft, et al., "The Canadian Adverse Events Study," *Canadian Medical Association Journal* 170 (2004): 1678–86.

⁴¹ C. H. Rojas-Fernandez, D. Carver, and R. Tonks, "Population trends in the prevalence of benzodiazepine use in the older population of Nova Scotia: A cause for concern?" *Canadian Journal of Clinical Pharmacology* 6, no. 3 (1999): 149–56. See also, "Therapeutics Initiative. Use of Benzodiazepines in BC. Is it consistent with the recommendations?" found at: <u>http://www.ti.ubc.ca/PDF/54.pdf</u>. Accessed 21 June 2007; and K. Tu, M. Mamdani, J. Hux, and J. Tu, "Progressive Trends in the Prevalence of Benzodiazepine Prescribing in Older People in Ontario, Canada," *Journal of the American Geriatric Society* 49 no. 10 (October, 2001): 1341–5.

⁴² "Accessible, safe, client-centred, timely, efficient, and equitable," from the Saskatchewan Health Quality Council Annual Report 2004/2005 (Regina, 2005). Found at:

⁴³ "Acceptability, accessibility, appropriateness, effectiveness, efficiency, and safety," from the Alberta Quality Matrix for Health (Alberta Health Quality Council). Found at:

http://www.hgca.ca/index.php?id=87. Accessed 11 April 2007.

⁴ Ontario Health Quality Council 2006 Annual Report (Toronto, 2006). Found at:

⁴⁵ US Institute of Medicine, Crossing the Quality Chasm: A New Health System for the 21st Century (Washington, DC: National Academy Press, 2001).

⁴⁶ *Quebec Public Health Act* (updated 1 September 2003) http://publications

duquebec.gouv.gc.ca/dynamicSearch/telecharge.php?type=2&file=/S_2_2/S2_2_A.html (accessed 26 September 2003); National Institute of Public Health Act http://publi

cationsduquebec.gouv.qc.ca/dynamicSearch/telecharge.php?type=2&file=/I_13_1_1/I13_1_1_A.html (accessed 26 September 2003).

⁴⁷ See Pathways to Education: http://pathwaystoeducation.ca/home-executive.html. Accessed 12 April 2007.

⁴⁸Health Disparities Task Group of the Federal Provincial Territorial Advisory Committee on Population Health and Health Security, "Health Disparities: Roles of the Health Sector" (2004). Found at: http://www.phac-aspc.gc.ca/ph-sp/disparities/pdf06/disparities discussion paper e.pdf. Accessed 23 September 2006. ⁴⁹ Ibid.

⁵⁰ Ibid.

⁵¹ "A population health strategy focuses on factors that enhance the health and well-being of the overall population. It views health as an asset that is a resource for everyday living, not simply the absence of disease. Population health concerns itself with the living and working conditions that enable and support people in making healthy choices, and the services that promote and maintain health," from Federal Provincial Territorial Advisory Committee on Population Health, "Strategies for Population Health: Investing in the Health of Canadians" (1994).

⁵² M. Lalonde, "A New Perspective on the Health of Canadians" (Ministry of Supply and Services, 1974). Found at: http://www.phac-aspc.gc.ca/ph-sp/phdd/pdf/perspective.pdf. Accessed 4 November 2005.

⁵³ J. Epp, "Achieving Health for All: A Framework for Health Promotion," released at First International conference on Health Promotion (Ottawa, 1986). Found at: http://www.hc-sc.gc.ca/hcs-sss/pubs/caresoins/2001-frame-plan-promotion/index_e.html. Accessed 7 September 2006. ⁵⁴ B. Zimmerman and S. Globerman, (2004) "Complicated and Complex Systems: What Would Successful

Reform of Medicare Look Like?," in Health Care Services and the Process of Change, ed. P.-G. Forest, T. McIntosh, and G. Marchildon (Toronto: University of Toronto Press), 21-53.

⁵⁵Health Disparities Task Group of the Federal Provincial Territorial Advisory Committee on Population Health and Health Security, "Health Disparities: Roles of the Health Sector" (2004). Found at: http://www.phac-aspc.gc.ca/ph-sp/disparities/pdf06/disparities discussion paper e.pdf. Accessed 23

September 2006.

⁵⁶ M. Lemura, C. Neudorf, and J. Opondo, "Health disparities by neighbourhood income," *Canadian* Journal of Public Health 97 (2006): 435-9.

⁵⁷ See: http://www.saskatoonhealthregion.ca/news you need/media centre/media/2006/news 091106.htm. Accessed 11 April 2007.

⁵⁸ Saskatchewan Hansard, 19 March 2007. Found at:

http://www.legassembly.sk.ca/committees/HumanServices/Verbatim/070319HU.pdf. Accessed 11 April 2007.

⁵⁹ W. Langewitz, M. Denz, A. Keller, et al., "Spontaneous taking time at start of consultation in outclient clinic: cohort study," British Medical Journal 325 (2002): 682-3.

⁶⁰ H. B. Beckman, and R. M. Frankel, "The effect of physician behavior on the collection of data," Annals of Internal Medicine 101 (1984): 692-6.

M.K. Marvel, R.M. Epstein, K. Flowers, et al., "Soliciting the client's agenda: have we improved?," Journal of the American Medical Association 281 (1999): 283–7.

http://www.hqc.sk.ca/download.jsp?DB3G1GthpqzpLvJEazdYnX8xfpeDzqbvqhr5yD/Ts9e8cXBjtGTIzA= =. Accessed 24 July 2006.

http://www.ohqc.ca/pdfs/ohqc_report_2006en.pdf. Accessed 6 June 2006.

⁶² C.H. Braddock, K.A. Edwards, N.M. Hasenberg, et al., "Informed decision making in outpatient practice: times to get back to basics," *Journal of the American Medical Association* 282 (1999): 2313–20.

⁶³ J. Oxman-Martinez and J. Hanley, "Health and services for Canada's multicultural population: challenges to equity," Canada Citizenship and Immigration, in "Serving Canada's multicultural population for the future," discussion papers (2005). Found at:

http://www.pch.gc.ca/multi/canada2017/PDFs/document_e.pdf. Accessed 20 November 2006. ⁶⁴ J. M. Anderson, "Ethnicity and illness experience: Ideological structures and the health care delivery system," *Social Science & Medicine* 22 (1986): 1277–83.

⁶⁵ Oxman-Martinez and Hanley, "Health and services for Canada's multicultural population."

⁶⁶ C. Schoen, R. Osborn, P.T. Huynh, et al., "On the front lines of care: primary care doctors' office systems, experiences, and views in seven countries," *Health Affairs* 11 (2006): w555–w571. Found at: <u>http://content.healthaffairs.org/cgi/content/full/hlthaff.25.w555/DC1</u>. Accessed 2 November 2006.

⁶⁷ See the website for the London Intercommunity Health Centre: <u>http://www.lihc.on.ca/;</u> or the Latin American Diabetes Program: <u>http://www.pldiabetes.com/</u>.

⁶⁸ B. Harvey, "The diabetes epidemic from a CHC perspective," presentation to the annual meeting of the Association of Ontario Health Centres (Kingston, 5 June 2006).

⁶⁹ R.S.A. Hayward, G.H. Guyatt, K.-A. Moore, et al, "Canadian Physicians' attitudes about and preferences regarding clinical practice guidelines," *Canadian Medical Association Journal* 156 (1997): 1715–23.

⁷⁰ B. Hutchison, C.A. Woodward, and G.R. Norman, et al., "Provision of preventive care to unannounced standardized clients," *Canadian Medical Association Journal* 158 (1998): 185–93.

⁷¹ Ontario Health Quality Council First Annual Report (Toronto, April 2006).

⁷² Schoen, Osborn, Huynh, et al., "Taking the pulse of health care systems," w5–509–w5–525.

⁷³ Organization for Economic Cooperation and Development, "Health data set" (10 October 2006). Found at: <u>http://www.oecd.org/dataoecd/20/51/37622205.xls</u>. Accessed 25 April 2007.

⁷⁴ Ontario Health Quality Council 2007 Report (Toronto, 2007), 42. Also see: <u>http://www.accessalliance.ca/</u>.

⁷⁵ M.M. Rachlis, "Public Solutions to Health Care Wait Lists" (Canadian Centre for Policy Alternatives: Ottawa, January 2006). Found at:

http://policyalternatives.ca/documents/National_Office_Pubs/2005/Health_Care_Waitlists.pdf. Accessed 12 January 2006.

⁷⁶ For more details see the Health Quality Council's website: <u>www.hqc.sk.ca</u>.

⁷⁷ N. Kates, A.-M. Crustolo, S. Farrar, et al., "Mental health and nutrition: integrating specialists' services into primary care," *Canadian Family Physician* 48 (2002):1898–1903.

⁷⁸ N. Kates, "Managing chronic mental health problems in primary care," presentation to Ministry of Health and Long-Term Care Expo" (Toronto, 19 April 2006).

⁷⁹ Alberta hip and knee replacement project: Interim results (Alberta Bone and Joint Institute, December 2005). Found at: <u>http://www.albertaboneandjoint.com/PDFs/Int_Rep_Dec_19_05.pdf</u>. Accessed 20 December 2005.

⁸⁰ C.M. Hohl, J. Dankoff, A. Colacone, et al., "Polypharmacy, adverse drug-related events, and potential adverse drug interactions in elderly clients presenting to an emergency department," *Annals of Emergency Medicine* 38 (2001): 666–71.

⁸¹ R.M. Tamblyn, P.J. McLeod, M. Abrahamowicz, et al., "Questionable prescribing for elderly clients in Quebec," *Canadian Medical Association Journal* 150 (1994): 1801–9.

⁸² US Institute of Medicine, *To Err is Human: Building a Safer Health Care System*, eds. L.T. Kohn, J.M. Corrigan, and M.S. Donaldson (Washington, DC: National Academy Press, 2000).

83 Ibid.

⁸⁴ See, <u>www.oscarmcmaster.ca</u> for more details.

⁸⁵ D. Chan, "Free/Libra Open Source Software (FLOSS) in Health Care: showcase of OSCAR, a Canadian product," presentation (12 November 2006).

⁸⁶ See: http://www.caisi.ca/wiki/index.php/Main_Page. Accessed 15 December 2006.

⁸⁷ Rachlis, "Public Solutions to Health Care Wait Lists."