



**CMA SERIES OF HEALTH CARE
DISCUSSION PAPERS**

*Looking at the
Future of Health,
Health Care and
Medicine*

CMA is
leading
the debate
on the
future of
health and
health care
in Canada.



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Foreword

What will life be like in 20 years? What does the future hold for health, health care and medicine? What social, technological, political and economic changes will have the greatest impact? What will these changes mean to the role of the physician?

This report presents the highlights of the CMA Futures Project, which was initiated in 1998. The project was designed to broaden the profession's thinking of the future, clarify values and engage physicians, other health care providers, politicians, the media and the public in a discussion of our shared preferred future, recognizing that widely different futures are possible and that today's choices create tomorrow's health care system.

The CMA invites comment on the vision, values and action steps contained in this report. We welcome opportunities to talk with others about how the health care system can be improved for the benefit of Canadians and society in general. You can email us at futures@cma.ca, or write to CMA Research Directorate, 1867 Alta Vista Dr., Ottawa ON K1G 3Y6.

For more information on the CMA Futures Project, please visit our website at www.cma.ca

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The CMA acknowledges with appreciation the extensive assistance received from Dr. Trevor Hancock, a Canadian health futurist based in Kleinburg, Ontario. Dr. Hancock assisted with the preparation of the scenarios, facilitated the consultation process with the CMA joint councils and other stakeholders and drafted this report.

The "Futures Cone" diagram (page 4) is reprinted with permission from the authors, Clement Bezold and Trevor Hancock.

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1. Introduction

What will the future be like? That question has engaged humanity for millennia. But in the past few decades, through the field of futurism, we have tried to “study” the future or, more precisely, *ideas* about the future, as the future does not yet exist.

The future of our state of health and well-being has long been a topic of intense personal interest, but we also have a concern about the future health of the population, especially our children and grandchildren. We share a fascination (perhaps mixed with dread) with the rapid advances in technology that we see all around us. We wonder what these changes will mean to the delivery of health care and the work of health professionals, and we worry about emerging ethical challenges. Perhaps we also worry about whether the future will be ours to shape or whether other, larger forces beyond our control will shape it for us.

The CMA Futures Project

Beginning in the spring of 1998, the CMA undertook a project to explore the future of health, health care and medicine. The project was based on the following premises.

- The future cannot be predicted with any certainty; there is a range of plausible alternative futures ahead of us.
- The health care system of the future will reflect the society of which it is a part.
- The role of physicians in the future, including their scope of practice, will be affected by a wide variety of environmental, social, economic, political, technological, educational and ethical forces.
- The most important future is the one we prefer, the one we wish to have happen.
- Our preferred future is a reflection of our values, which can be expressed as a vision for the future of health, health care and medicine.

Based on these premises, the CMA Futures Project consisted of the following elements:

- A scan of some of the major forces likely to affect health, health care and medicine over the next decade or 2
- Development of a set of 4 plausible alternative futures for health, health care and medicine

- Examination of the plausibility, probability and desirability of these alternative futures
- Examination of the implications of these scenarios for health, health care and medicine
- Development of value statements based on reactions (likes and dislikes) to the alternative scenarios and their implications
- Development of a list of key actions that the profession might wish to take to encourage those aspects of the future that are desired and discourage or avoid those that are disliked.

The principal vehicle for this work was the CMA's Joint Councils and Committees (JCC), a group of some 80 physician leaders from across the country. To engage a larger number of stakeholders in the process, the CMA also convened the Alta Vista Forum and the CMA Futures Policy Conference, and elicited feedback in *CMA News* and on its web site. These events are listed chronologically below:

- April 1998 — JCC meeting to identify and explore major driving forces
- June 1998 — Presentation on the Futures Project to CMA Board
- October 1998 — Alta Vista Forum (meeting of key stakeholders in the health sector) to review and provide feedback on the 4 scenarios and identify common themes
- November 1998 — JCC meeting to explore the implications of the 4 scenarios, identify common themes and list preferences
- February 1999 — CMA Futures Policy Conference (some 150 participants including leading members of the profession and many of the stakeholders who had participated in the earlier forum) to review the 4 scenarios, discuss their implications, identify common themes and list preferences
- April 1999 — JCC meeting to review and elaborate on value statements generated in earlier groups and propose key actions for the profession
- Survey in *CMA News* and on web site to provide information on the Futures Project and solicit feedback from a wider audience.

A complementary “Future of Medicine” process provided an important vision statement for the role of

medicine; working definitions of health, health care and medicine; and initial discussion of the roles and scopes of practice of physicians in the future (see Appendix A).

This report documents the results of the CMA Futures Project. It contains an introduction to futures thinking and the methods used in futures work, as well as the results of the various parts of the project listed above. The value statements are intended to serve as a starting point for discussion of a preferred future.

Although being clear about our shared — and differing — values may help us shape a preferred future, it does not guarantee it. But the more widespread discussion is and the more all the key players engage in that shared discussion, the greater are the

chances that we will at least avoid the futures we don't want and will move toward one that we do want.

That is why this report concludes with a brief discussion of some possible next steps, as well as a guide to help those who are interested — be they small groups of physicians, other health care professionals, national health care organizations, regional health authorities, academic health science programs or concerned members of the public — to develop their own process of thinking about the future, clarifying values and developing a preferred vision. And that is also why the CMA will continue to work with its partners to create the best health care system in the healthiest country in the world.

2. Thinking about the future*

Futurists don't actually study the future; rather, they study ideas about the future using a variety of methods. Edward Cornish, founder of the World Future Society, commented that, "Futurists take historical fact and scientific knowledge and add human values and imagination to create images of what may happen in the future."² Values are key; if we are not clear about our values, we may end up with a future that is very different from what we would prefer. And imagination becomes important not only because it is a way of getting "outside the box" but also because the further into the future we look, the less relevant today's knowledge becomes.

The future is not fixed and immutable, but rather open and changeable. Moreover, futurists tend to believe that the future is plastic and can be shaped. We can invent or create our future; in fact we do so, consciously or unconsciously, every day, through the choices we make or don't make.

Health, health care and medicine are shaped by the society of which they are a part, with its cultural values, social systems, environmental and economic conditions and technological sophistication. The health care system of the future, and the practice of medicine within that system, will reflect society, not the other way around. Thus, in thinking about the future of health, health care and medicine, it is important to begin with an image of the overall society, as discussed in the section on scenarios.

Exploring alternative futures

One way to categorize the futures we face was proposed by Norman Henchey, a Canadian futurist. He suggested that we think about the future in terms of what is possible, plausible, probable and preferable.³

Possible futures are all the things we can possibly imagine, no matter how unlikely. Thus possible futures may include science fiction futures that transcend the currently accepted "laws" of science. For example, one possible future is that we will learn how spiritual healing works and will be able to treat people by using the energy aura of the healer.

Plausible futures comprise only the possible futures that seem to make sense given what we know

today. Plausible futures can be forecasts of individual trends or a set of scenarios that combine various trends to describe a range of alternative futures. Common plausible futures include a high-technology growth scenario; a sustainable society scenario; a scenario of environmental, economic and social decline; and a "high spirit" or transformational scenario. For each of these, we can describe in some detail a society — including its health status, health care system and the role of physicians — that would be consistent with the scenario. Exploring "alternative futures" enables us to compare a range of quite plausible options and to choose among them. Our choice will reveal the values that we hold, individually and collectively.

The **probable** future is the one we think is most likely to happen, based on examination of the current situation and appraisal of likely trends and future developments. It is one of the plausible futures, and is sometimes referred to as "business as usual." This "descriptive forecasting" reflects the fact that most people see the future as an extension of the present with little significant change. Likewise, most government and business planning assumes that the probable future is a straightforward extrapolation of the present.

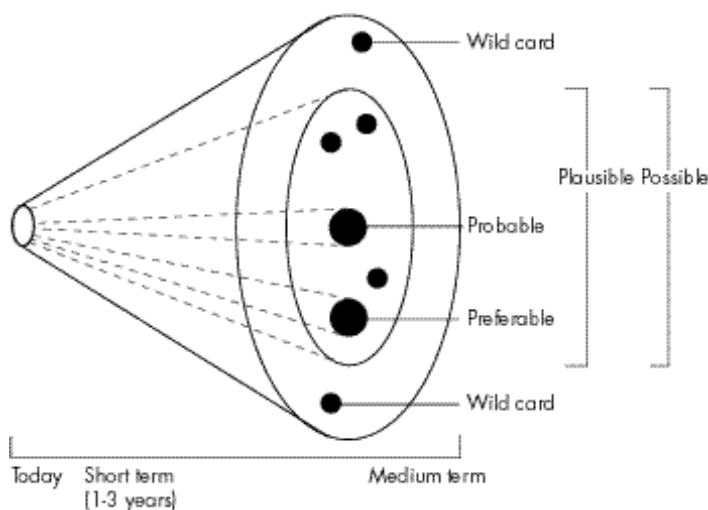
Ironically, history has shown that this image of the future is the least likely to occur. It assumes that all the conditions that shape our present situation will remain stable and unchanged. Descriptive forecasts based solely on recent trends can preclude futures that are different; they also may turn out to be the future we don't want. As the University of Hawaii futurist James Dator remarked, "Trends can take us with unerring accuracy to where we don't want to be!"

The **preferable** future is the one we would like to have happen and is sometimes called a "prescriptive future" or "normative forecast." This is where vision becomes important as it moves reality beyond the present toward the best that can be. A set of scenarios can and should include such options. Creating a shared vision of the preferred future health care system or of a healthy community can be a powerful technique for mobilizing an organization or community around a common purpose.

* This section is based in part on Bezold and Hancock.

The “futures cone” is one way to represent these types graphically (Fig. 1). The outer area is the zone of possibilities, which includes a number of “wildcards.” Wildcards are typically events with low probability but high impact. Although most planning efforts deal with the zone defined by the plausible, having a sense of what kinds of wildcards might arise is useful. The fall of the Berlin Wall and the transformation of the Soviet Union should remind us that dramatic, seemingly implausible change can occur very swiftly, and we need to be flexible enough to deal with surprises when they occur. Within the narrower zone of plausible futures there can be a number of scenarios, including the probable future. The preferable future is often different from the probable future and is usually — but not necessarily — within the plausible zone. The futures cone makes it clear that all these futures start from where we are today, but they diverge. The closer one is to today, the harder it is to tell them apart, but clearly choices made now can have dramatic effects over time.

Figure 1: Types of futures



Methods for looking at the future

Just as there is a range of alternative futures, there is also a range of methods for exploring the future, each with its own strengths and weaknesses. Some are more suited for exploring one sort of alternative future than another, although most can be adapted to different sorts of futures. Some methods are

- **Trends and forces:** At their simplest, trends are straightforward extrapolations (linear or otherwise) of historical changes into the future, although they may include broader events such as the changing role of women in society. Forces are environmental, social, political, economic or

other conditions that are pushing us one way or another. Corporate power, the information revolution and global ecological change are some of the key forces changing society today. By identifying the major forces in the social, political, economic, environmental, technological, ethical and other sectors that are likely to affect our organization or group, and by “scanning” the scientific and public media, we can often identify emerging trends of importance.⁵

- **Models:** Sophisticated computer models can be used to explore various options and to develop “what if” scenarios. Most commonly used in economics, they are employed in many other situations, such as predicting the impact of global warming and examining the combined global effects of environmental, social and economic change.
- **Delphi method:** In this technique, a number of people are consulted without convening them, thus protecting against the influence of powerful personalities. Variations can be used to assess the feasibility or probability of certain events. For example, a panel of scientific experts might be asked to assess the likelihood of a set of medical advances being in place by 2010.
- **Cross-impact matrices and “futures wheels”:** These and related methods are used to understand the interaction among key forces and trends and to explore unexpected and unintended consequences. For example, an unintended consequence of a strong societal focus on wellness might be discrimination against the unwell. Sometimes sets of forces are mutually reinforcing, and other times they cancel each other out. Understanding this helps in the construction of scenarios and the anticipation of the impact of various forces.
- **Scenarios:** Scenarios are coherent “stories” that assemble a large number of trends and forces or plausible events in a way that shows their interaction and their implications. Usually based on how different forces or trends and different sets of issues might play out, they are often presented as a narrative story or a “report from the future.”⁶
- **Visioning:** Visioning is used to create a preferred future by projecting values and aspirations into the future, then describing that future succinctly in a powerful phrase or sentence or as a scenario. One technique used in

“Thinking about the future is only useful and interesting if it affects what we do and how we live today.”
James Robertson, British expert on alternative futures

visioning is guided imagery, which can evoke powerful images of the future.⁷

Shaping the future

Good futures work involves forecasting the future, but, more important, it is concerned with thinking about the future and helping people who are not futurists to think more effectively and creatively and act more wisely with respect to the future. Thinking about the future is also of relevance to the decisions we make today.

Most futurists believe that the future will be shaped by human decisions and actions. They recognize that although the immediate future (1-5 years) will be largely shaped by decisions previously made (recognizing that discontinuities, such as the 1973 oil shock or the 1989 fall of the Berlin Wall can alter the future very swiftly), the medium- (5-20 years) and long-term future (20-50 years) will be substantially shaped by the decisions we make today and in the years ahead. Beyond 50 years, the future is so far removed as to make thinking about it in any practical sense extremely difficult.

Clearly, futures work must make policymakers and individuals better able to create the future they want. This brings us to 2 important and related points about futures thinking. First, the futures field is concerned with creating new images of what is possible; second, good futures work increases people's participation in thinking about and creating their preferable future.⁸⁻¹⁰

This highlights a key difference between the probable and the preferable future.

- The **probable future** may be seen as the future that will happen, come what may. As such, it seems to be something over which we have little or no control. If futures thinking focuses too much on the probable (which it has a tendency to do as planners like to know what to plan for), then it runs the risk of disempowering people and denying them choice. If people are told "this is the probable future," then their only choices are how to prepare for it and how to deal with it.
- The **preferable future**, on the other hand, is a liberating and empowering future, especially when it touches participants' more creative capacities. It not only enables but also encourages people to say, this is the future that we value and that we want to create (the emphasis being on we as this should be a collective process). The energy and creativity released in a preferable futures process can be astonishing.

It is vitally important to involve people both in designing the future they want and in making choices between the alternative futures open to them. Futures techniques that involve the use of complex and sophisticated technical models, professional expertise and language and that are limited to a small inner circle are undemocratic. At its best, futurism is a form of what Alvin Toffler called "anticipatory democracy," helping people decide what sort of future they want and how they might achieve it. Thus, the input not only of physicians but also of other stakeholders from the health care field and wider society is very important in discussions about the future of health, health care and medicine.

Values and vision

"Vision is values projected into the future." Clement Bezold, President, Institute for Alternative Futures

A preferable future is based on our values, which can be expressed simply as statements of what we like and dislike. Our vision of a preferable future is an expression of those values projected into the future, and a preferred scenario is one way of describing vividly what such a future would look like. Such visions are inspiring and help us to be the best we can be.

Martha Rogers,¹¹ who developed a set of alternative futures for the Canadian Nurses Association, describes a 3-stage process: an "awakening of the mind" that involves learning about global futures and gaining a futures perspective; a subsequent "awakening of the heart" that leads to a deep sense of caring for humanity and the planet; and an "awakening of the soul" as those engaged in the process begin to question their basic values and sense of meaning and purpose, which may lead to a sense of personal responsibility and a commitment to action.¹²

A vision must touch our heart, ignite our souls, feed our minds and ground us in the midst of turbulence.

The purpose of a vision is not to enunciate a stable comfort zone from which none of us move. Rather, it is to define alternatives to what exists at present, critiqued against justice and fundamental morality, which then need to be nurtured and nourished.... For effective visions to be created for the future contribution of medicine to our community, the profession must be prepared to devote time and energy to reflecting upon its practice and the way our community organizes its response to illness. From that reflection, tested against the fundamental values that we endorse as a profession, visions of the future must be constructed. Inevitably, these will challenge the prevailing view of how we do things and lead to conflict — it cannot possibly be otherwise.¹³

Stephen Leeder, professor of public health and community medicine at the University of Sydney, Australia

3. Major trends and driving forces

It is widely recognized that we are in a period of unprecedented rapid change. CMA's environmental scanning and assessment identified a wide variety of areas where changes can be expected to have an impact on health, health care or medicine. In addition to the usual categories for an environmental

scan — social, economic, political and technological trends — additional categories of relevance to health and medicine were added: environmental, educational and ethical issues and health status. The main issues identified in each category are shown in Table 1.

Table 1: Main trends and driving forces identified in environmental scanning

Health status	Advances in drugs and research	Environmental
Life expectancy	More expensive diagnostic technology	New strains of antibiotic-resistant viruses
Disease patterns	Artificial organs	Air, water, soil pollution
Mortality rates	Advances in surgical techniques (e.g., bloodless surgery)	Global warming
Disability	Advances in medical devices	Ease of travel, population mobility
Mental health status		New diseases, rise in infectious diseases
Societal	Economic	Ozone depletion
Immigration, ethnic diversity, multiculturalism	Globalization (Multilateral Agreement on Investment)	Possibility of germ warfare
Growing divergence, polarization of haves and have-nots	Decreasing federal transfer payments	Resource consumption, depletion of nonrenewable resources
Increase in number of single-parent and nontraditional families	Changing public-private balance	Disposal of medical materials, recycling
Population aging	Increase in number of alternative providers (and inclusion of coverage in public programs)	Ethical
Increasing use of alternative medicine	Increase in alternative funding for physicians	End-of-life issues (euthanasia)
Rise in consumerism, empowerment, patient autonomy	Growing disparity, decline of middle class	Human genome project, genetic engineering
Urbanization	Decline in earning power of physicians (increasing overhead)	Privacy of health information
Aboriginal population issues (numbers and concentration in urban areas; health status)	More expensive drugs	Rationing
Changing values and life-styles	Political	Changing patient-physician relationship
Unemployment	Unstable public funding for health care, decreased transfers	New reproductive technology
Gender issues	Globalization, free trade	Commercialization of medicine
Generation differences	Increased privatization, public-private partnerships	Educational
Higher expectations within society (entitlement)	Devolution, regionalization	More informed patients (Internet)
Technological	Political accountability for health care	Diminished access to medical education
Human genome project, genetic engineering	Relevance of <i>Canada Health Act</i>	Shifting balance of public to private education
Patient self-testing, self-diagnosis, self-treatment	Quebec separation, unity debate	Diminished resources for academic medicine
Telemedicine	Rise in conservatism, "right thinking"	Increase in self-directed learning
Growing ease of communication of information (greater consumer access through Internet; navigational aids)	Increase in number of interest groups	Greater use of information technology
Computerization of health information (smart cards)	Rise in political power of youth and seniors	Mandatory continuing medical education, recertification
Robotics		

Implications for health, health care and medicine

These issues were researched and a report on the environmental scan was prepared. These issues constitute the main trends and driving forces that need to be considered when discussing the future of health, health care and medicine and developing scenarios and elements of a preferred future. A brief summary of their implications is presented below.

- The population that physicians will serve in the future will have a larger proportion of seniors and will be more ethnically diverse. It will demand accountability, input into decisions and information pertaining to health. Changing demographics, unemployment, urbanization, economic disparity and alterations in family structure will influence the future practices of physicians.
 - The health of the Canadian population will likely continue to improve (although slowly) as a result of healthier life-styles, improved social, economic and environmental conditions and better health care. Life expectancy will increase; morbidity will be reduced. But this improvement is not inevitable and could be undermined by the emergence of new infectious diseases or resistant bacteria, as well as by global ecological problems and attendant social or economic problems.
 - The evolution of the role of governments in health care from that of payer to manager of health care services is likely to continue. As a result, federal-provincial funding arrangements, cost-effectiveness and globalization will be among the factors determining the availability of resources.
 - The nature of disease is changing. New illnesses appear and old illnesses resurface with alarming frequency. Tuberculosis, antibiotic-resistant infections, hepatitis C and HIV illustrate how the health care system and the practice of medicine must change as a result of the emergence of different disease entities.
 - The impact of pollution, global climate change and resource depletion on the nature of illness and disease in the future is uncertain but worrying. In addition, there is a move to a population health perspective, in which research and policy efforts are directed toward the health of communities and populations rather than individuals.
 - Medicine will continue to be influenced by political factors that are not solely fiscal. Globalization, decentralization and a continued move to privatization will all shape practice circumstances.
 - Information technology will become so pervasive that universal access to health care will require universal access to this technology. Well-informed patients will have access to powerful research, self-diagnosis and self-treatment tools and to e-providers around the world. Patient-provider relations will change, as will provider practices and provider organizations.
 - Numerous ethical concerns are evolving, particularly as a result of rapid technological advances and research. End-of-life issues, rationing, genetic engineering, reproductive technology and the social contract will require intense medical and public debate in the future. Shared decision-making by patients and physicians will become more common.
 - Advances in information technology, emphasis on continuing professional enhancement and a public that demands uniform, high standards of medical care will raise issues such as mandatory continuing medical education and recertification.
 - Medical practice in the future will be shaped by projected and unforeseen scientific advances that will enhance our knowledge and understanding of disease and illness as well as our understanding of the determinants of health. The use of clinical practice guidelines and other evidence-based tools will expand as the medical profession and other health care professionals strive to deliver high-quality health care to Canadians.
-

4. Alternative futures: the CMA scenarios

One of the key elements of the CMA Futures Project was the development and use of a set of 4 scenarios describing health, health care and medicine in Canada in 2020. Futurists use such scenarios for several reasons:

- Scenarios are a useful way to ensure that a range of plausible alternative futures is considered, so that we do not become fixated on any one view. This also helps us remember that the future is “plastic,” that we have choices.
- Scenarios paint a picture of the global and societal contexts and help us realize that these contexts shape the sector that is the focus of our concern, rather than the other way around.
- The use of scenarios helps us understand the values that underlie the choices we have made and might make. By presenting alternatives to which we respond emotionally as well as intellectually, scenarios help us clarify our own values and thus choose a preferred future.

To some extent, scenarios are caricatures of the future. They heighten the contrast between certain sets of values and the consequences of those values if the scenario is played out to its logical conclusion. At the same time, they should be plausible; we should be able to agree that they could happen, whether we like the result or not.

In practice, the future may be more like a mosaic without the clear-cut distinctions that the scenarios present. If each scenario is represented by a colour, we might be able to see the separate colours close up, but from a distance one hue (future) would predominate. For example, a “business as usual” future might contain elements of market triumph, decay and decline and a more green or transformed society. The key issue is what “colour” we want to be predominant in our future.

Scenarios allow for and, in fact, encourage flexibility and adaptability. Preparing for only the probable future might make us too rigid in our planning; by considering a number of alternative plausible scenarios, we can be prepared for adversity and we can identify the robust forces, trends and strategies that will enable us to adapt to and deal effectively with whatever future we face.

The 4 plausible alternative futures developed for the CMA Futures Project were based, in part, on scenarios developed in other societal and health care futures exercises (see Appendix B). The CMA scenarios are

- The official future
- The market triumphs
- In failing health
- The 4th path

They are described below, as “reports from the future” and in synopses.

Scenario 1 — The official future

Synopsis

The year is 2020 and technology and the knowledge-based economy are driving a reasonably prosperous economy. Unemployment is high, but a new “guaranteed annual income” (GAI) allows people the freedom to develop knowledge and community-based services without risking bankruptcy. The GAI has also contributed to a rise in voluntarism, which is now called citizen service. This service is particularly important to the fully regionalized and integrated health care system, which depends on a wide variety of community involvement for programs such as home care and self-care networks. Improvements in technology have led to a boom in self-care and self-diagnosis through the support of community health coaches and care aides, supported by protocols disseminated through the National Health InfoNet. Almost all physicians operate within the system and enjoy a combination of salary plus seniority and performance bonuses, fringe benefits and other perks. As integral members of the community health team, they benefit from the support of others and the regional health information system allows them to monitor and improve quality of care continually. However, they have also lost some of the independence their predecessors enjoyed.

The future is what we thought it would be!

[A report from Ms. Joceline Chow, Chair of the Central Regional Health Board, at the Annual General Meeting held in the auditorium of the Regional Health Campus, June 15, 2020]

This year marks the Silver Anniversary of our Regional Health System, which makes it a suitable time for reflection on our achievements over the past 25 years. Over that period, we have grown and matured as an organization and as a community. When we were first established by the provincial government in 1995, our powers were comparatively weak, our system over-bedded, our community relatively uninformed and disempowered, and our physicians were essentially “outside” the system as independent, fee-for-service entrepreneurs. Today much of that has changed, as too has society around us although, surprisingly, it has changed in much the same way we thought it might back then. So it is worthwhile, in this time of reflection, to reflect first on the societal changes we have seen.

Adjusting to globalization: The 1990s and the first decade of this new millennium saw rapid growth in globalization not only of the economy, but also of communications and culture. It was a time of considerable turbulence, as economic forces buffeted our traditional resource-based economy and the manufacturing sector.

Unemployment remained high as jobs shifted to Mexico and other low-wage economies in Asia and Latin America. One consequence of this was a decline in “traditional” occupational health problems and an increase in stress-related problems associated with employment insecurity and the attendant family and social disruptions. Another consequence was higher levels of crime and violence, especially among our disadvantaged youth. However, the Canadian commitment to social equity and a compassionate society remained strong, as it did among our European Union partners, enabling us to weather the storm.

But in the last decade, thanks to the great emphasis on investing in our children and the development of a knowledge-based economy in the early part of the century (reflected at a local level in the Regional Knowledge Consortium, of which the Regional Health System is an important partner), the comparative advantage of a highly integrated, wave-webbed, knowledge-based regional economy has begun to assert itself. Moreover, our highly ethnographically diverse population has proven to be a real asset in linking us to the emerging economies in many regions of the world, thus boosting our own economy. Our 30-hour work week and broad employer commitment to creating healthy workplaces (in the interests of productivity) mean we have large numbers

of healthy, highly motivated people with free time for volunteer activities.

Of course, poverty has not been eliminated, and health status is still related to income and education. But the increasing disparities that we saw at the beginning of the century have now been reversed, thanks in no small part to the continued commitment to an income redistribution system that ensures that no seniors or families with children live below the poverty line. With adequate food and shelter and a good education, most families are doing okay now.

One area where we have not made much progress in the past 25 years, sadly, is the environment. The decline in our resource-based industries (forestry, fisheries and agriculture) has been due at least as much to our unsustainable utilization of these renewable resources as it has been to the climatic shifts that have resulted from global warming. Admittedly the decline of these industries — and the shift to cleaner technology in the manufacturing sector — have contributed to an improvement in our local environmental quality, but on a global scale the combination of increased affluence and expectations, growing populations and lack of political will has pushed many of our global commons to the brink of collapse. In spite of the promise of genetically engineered crops, fish farming and the like, per capita global food production has declined 15% over the past quarter century, with devastating consequences for the poor, especially the eco-refugees displaced by drought, deforestation, floods and other consequences of global warming and resource depletion.

The terrible irony is that global food scarcity has actually benefited our community, as we have been forced to eat less meat and other resource-intensive foods, consuming instead a more locally grown and more vegetarian diet, with some significant beneficial effects on our health; rates of heart disease, cancer, diabetes, obesity and other health problems have all declined in the past decade or 2, not simply because of our improved medical care but because we are eating less and eating better. This has been greatly aided by the great strides we have made in genetically engineered foods.

Although a visitor from 1995 would no doubt be shocked and distressed by the state of the “global commons,” I think they would be impressed by our technological sophistication. There is near universal access to the Global InfoNet from anywhere on the planet, so that personally tailored and relevant information — including health information — is easily accessible. Robotics and intelligent systems have replaced humans in many hazardous occupations, while our biotechnical industrial base means that increasingly we are able to create products with little

or no waste. (That same technology, of course, has revolutionized health care.)

Health care — *the same but different:* If our visitor from 1995 was depressed by our environment and impressed by our technology, they would perhaps be more at ease with our health care system. Perhaps to some people's surprise, the system has evolved pretty much as might have been expected.

Our health status remains among the highest in the world (in spite of a dip in the early part of the century due to the combination of adverse environmental, social and economic conditions), primarily because we again have a high level of social and economic development. Our aging population continues to enjoy good health thanks to a combination of a healthy life-style, simple preventive measures, sophisticated low-cost care and recent advances in biogenetic therapies, including tissue regeneration techniques. However, and as expected, the reduction in cancer and other diseases of aging has added little to overall life expectancy, although adding immeasurably to the quality of life. As a result, there is far more emphasis on mental and social well-being, aided by rapid growth in the use of the specific neuropsychic medications made possible by the Human Brain Project, which did for psychoneurology what the Human Genome Project did for genetics a decade earlier.

The system remains universally accessible — efforts in the early part of the century to use NAFTA to force open the national health insurance program to private competition from the United States failed — and the private share of health care funding has fallen since then from 38% to the present level of 27%, still higher than our counterparts in the European Union, but nowhere near as high as in the still troubled U.S. system. Following the Year 2005 Federal-Provincial Funding Agreement — insisted on by an irate public and a united front from the health professionals — the federal government's share of funding was fixed at 40%, with home care, basic pharmaceuticals and public health now covered using the savings from the 30% decrease in the number of hospital and long-term beds since then. The share of gross domestic product (GDP) dedicated to health care has remained pretty constant at around 10% for the last decade, although differences in service levels can still be found both between and within provinces, especially where health boards have been able to get local taxes approved.

Our own Regional Health System, like most across the country, has considerable autonomy in managing the hospital, home and community care, primary and specialty medical care and public health services within a global budget and provincial policy

guidelines. We provide decent care for all, using our sophisticated information technology capacity and our network of local providers and volunteer aides to reach the more rural parts of our region. Moreover, our Reasonable Expectations Committee, with input from key stakeholders in communities throughout the region, has been quite successful in achieving broad agreement on what are reasonable expectations on the level of care we can all expect. This has been particularly important in reducing the cost of end-of-life care, where there is now a broad community consensus on improving the quality of death by avoiding excessive intervention.

Our approach to health care begins with an emphasis on health promotion and disease prevention, using a wide array of proven social, behavioural and biomedical strategies. As a result of our actions, as well as the widespread access to and awareness of health knowledge on the Global InfoNet, we have a sophisticated, assertive and generally healthy population. Moreover, as a powerful regional authority, we have worked with others to address the broad environmental, social and economic determinants of health, speaking out forcefully on occasion!

We are proud of the fact that we are able to provide technologically sophisticated, effective and humane care in an economically efficient manner. This is made possible in part by the high level of self-care we have been able to encourage and support — the National Self-Care Network and the self-diagnosis and self-care protocols on the National Health InfoNet have been particularly important in this respect. This has also enabled us to use self-care coaches and community care aides, supported by this technology, to provide a significant amount of the primary and community care needs of the community. Indeed, voluntarism has been particularly important for the Regional Health System, where community involvement in a wide range of activities — from community visiting to home care and self-care networks to healthy neighbourhood coalitions — is high.

Primary care teams consist of a wide mix of staff as well as volunteers and self-care coaches. The primary care physicians, themselves subspecialists within their health centres, act as guides, consultants and team managers in providing care and ensuring that good, humane care is received at the high-tech specialty centres.

The biomedical breakthroughs in the areas of bio-assays, body scans, the early diagnosis and treatment of cancer and heart disease, as well as advances in neuropsychology and immunotherapy that we have witnessed this century have certainly played their part

in improving the health and the quality of life of our population. Specialists in these areas are supported by an array of sophisticated computer-assisted diagnosis and treatment (CAD-T) systems as well as specialized nursing staff and technicians.

Data on our clinical outcomes and user satisfaction is publicly available for all our facilities and personnel, which not only enables citizens to monitor our performance but enables us to make comparisons with other regional health systems. These sophisticated integrated national health information systems also enable us to monitor the use and effectiveness of pharmaceuticals, biotechnological and surgical techniques, including our ability to identify effective and efficient uses of what, in the 1990s, was quaintly called alternative medicine.

For the physicians who are part of our system — most of the primary care physicians and virtually all of the specialists — the combination of salary plus seniority and performance bonuses, fringe benefits and other perks of a steady job seem to be much appreciated, as is the opportunity to work as a key part of the local community health team. The regional health information system enables them to monitor their own performance and continually improve the quality of their care, a situation that their predecessors of a generation ago might have found irksome and intrusive, but which they seem to find challenging and helpful.

Scenario 2 — The market triumphs

Synopsis

The Canadian medical market has been opened up to consumer choice. Huge corporations now battle for shares of the health care pie and rely on technology such as “virtual-MD” computer programs to provide self-care guidelines and on “patient-service agents” to reduce the demand or costly care by physicians. As is standard in a free market, there are winners and losers. The upper-tier “customers” enjoy the highest health status and the application of the latest technological advances in medicine. Those in the lower economic strata receive lower levels of coverage according to the contracts government have signed with the health corporations. Due to changes such as telematic diagnostic devices and patient-service agents, physician numbers have been reduced greatly and those who remain must meet and maintain rigid through-put and outcome targets.

A healthy bottom line

[Annual report to the shareholders of Canada Health Inc. (a wholly owned subsidiary of America Health Inc.) by Mr. Peter (Pete) Beston, President and CEO, September 15, 2020 (This presentation was “holocast” to shareholders from the CHI auditorium on the 125th floor of the Downtown Healing Headquarters)]

Good morning and welcome to the 15th Annual General Meeting of Canada Health Inc. — and the first to be transmitted holographically. A word of warning, when we come to the discussion period, you will be virtually present here in our auditorium, so I hope you are suitably attired!

This has been a very profitable year for the company, and we have continued our steady growth since the opening up of the medical market to consumer choice in 2004. Our nearest rival, National Medical Services, has lost market share to us, a consequence of the successful introduction of our Patient Service Agent (PSA) program, coupled with the free distribution of our latest Virtual-MD home consultation holo-disk. In this diverse free market of heightened consumer choice, not just at the upper tier, but, thanks to the Federal Voucher System at the lower tier too, we now hold 42% of the upper-tier consumer market, 31% of the employer-contract market and 19% of the less lucrative lower-tier and government voucher market that covers 20% of the population.

But more of that later. First, let me review the societal context that has led to this success and that speaks to our prospects in the coming years.

The triumph of the free-market model in China in the early part of this century merely confirmed the dominance of freedom and choice that was already evident in the late 20th century. The success of the transnational corporations in obtaining corporate member status at the United Nations in 2006 set the final seal on the triumph of the market. This corporate member status was very important in reigning in the more ridiculous attempts of the UN agencies to constrain the free market and to impose unnecessary limitations on competition, making it increasingly difficult for high-tax societies, such as Canada, to sustain the public subsidy of health care and other public services, which was, in effect, an unfair subsidy to their own private sector. This created an environment that made it possible for us to succeed in our challenge under the NAFTA to open up the market.

The triumph of the market model has meant that corporations have been able to extend the benefits of competition to almost the entire planet, providing wages and benefits to countless millions in Asia, Latin America and some parts of Africa. It

must be noted, however, that although this is a generally rosy picture, some problems remain. Corporations are not charitable organizations, after all, and cannot be expected to provide services to those who, for whatever reason, do not avail themselves of the benefit of the market place. Thus significant parts of Africa, some parts of Asia and Latin America and even some segments within our own country suffer as a consequence.

Of course, there have been some casualties of what one writer in the 1990s referred to as the “creative destruction” of the free market, but that is only to be expected. The polarization of our society has continued to increase in Canada, just as it has globally, as free enterprise creates winners and losers; inevitably, this has meant some widening in the health status gap as the poor fail to keep up with the better off. Those who cannot acquire the skills needed for success in our fast-paced world are inevitably marginalized and end up living and working in less healthy situations, but the government-operated public health and social insurance system for these marginalized groups, combined with the right mix of appropriate multichannel holovision programming, has proven enough to prevent trouble spilling on to the streets.

More serious, the economic costs of the rather significant environmental degradation and accelerated global warming that followed the boom of the first 15 years of this century are now beginning to be felt as are the health impacts, principally outside Canada. However, this simply provides a spur to the creativity of the market to address those issues, and I am confident that, in time, the market will triumph here as well, particularly if governments create the right incentives.

Indeed, our technology knows no bounds. Nano-engineering is just over the horizon, which will allow us to manufacture all manner of products with little or no waste production. And although it is unfortunate that many species on land and at sea that our grandparents knew so well are no longer with us in the wild, our genetically engineered replacement stocks are far more productive, far more uniform and far easier to manage. As a consequence, most of the world will be well fed this year, with the exception of those on the economic margins. Also just on the horizon is fusion power, which may mean that we will finally be able to break through to the hydrogen economy that has long been our aim.

Health care: I am pleased to say that this year, for the first time, health care expenditures in Canada will exceed 13% of GDP — and we will reap a significant proportion of that! (Our registered medical services

plan (RMSP) — an innovation in 2008 — has played an important role here in expanding the funds that our upper-tier customers in particular can shelter from the tax grabbers.)

While continuing to ensure that the bottom line is healthy, we adhere to our corporate philosophy “the best care your money can buy” as the basis for our success. Our comprehensive database ensures that we can provide consumers with information on both the cost and the effectiveness of the various care options we provide, leaving them to make the final choice in an informed market. We are then able to ensure that whatever their choice, we can provide it in the most efficient manner, using the most appropriate, least expensive and least harmful combination of technology and personnel. As a result, our bed ratios are among the lowest in the world today, I am proud to report.

Of course, the care options available are somewhat more limited for the employer-contract market, consistent with our commitment to our corporate clients to keep their costs low and their productivity high. However, here as in our other market segments, we apply the most sophisticated methodologies and incentives to ensure that our customers adhere to the healthy life-style guidelines; in the case of our corporate clientele, this is complemented by our Healthy Workforce program, which effectively reduces health-related lost work days.

Finally, our integrated information system allows us to closely monitor and manage consumers who are a part of our lower tier and government-contract market segment, thus ensuring that they receive adequate care consistent with the lower levels of coverage they are entitled to. Our charitable care continues to consume a proportion of our revenues, but we are easily able to maintain this within the 5% write-off margin we have allowed.

Our upper-tier customers, most of whom benefit from RMSPs and executive health plans, continue to enjoy the highest health status in Canada, according to our latest market research. This is due to our impressive Lifetime Health Maintenance Electronic Monitoring Program, which monitors their health every step of the way and feeds data back to our clinical resource base. This way we can predict problems before they occur; offer incentive-based life-style programs (such as premium reductions for lower blood lipids); intervene early and aggressively with treatments based on individual biophysiological profiles; and provide the very latest in technically sophisticated treatment, thus reducing costs by avoiding the need for high-cost end-stage treatment. (Of course our popular “living wills” program also helps reduce the

costs of dying.) And as nanomedicine comes on stream in the next few years, we hope to be able to offer an even more extensive range of biofix and regeneration options soon.

Also on the technical side, this has been a very profitable year for our organ auto-cloning division and our ovum harvesting and sales division, both of which have achieved record sales. And this year, for the first time, we are making available our own bio-engineered vaccines to protect our employer-contract and government-voucher customers against several forms of cancer — a very cost-effective strategy in the long term, even though expensive in the short term (hence the write-down of those costs).

On the personnel side, we have successfully reduced our primary care physician-to-customer ratio by 10% over the past 3 years through the introduction of telematic diagnostic devices (TDDs) supplied free of charge to all our customers. And we have ambitious plans to reduce the ratio by a further 20% over the next 5 years as we graduate increasing numbers of patient service agents from our Staff College, itself a growing profit centre. Indeed, we are now considering expanding it to become the first semi-private health care training school in the country, given the recent closure of 5 medical schools across Canada and the need to train a variety of health care professionals — including physicians — to fit in with our management philosophy and systems.

Our remaining physicians (although reduced in number, 70% are now specialists) continue to enjoy high status and incomes, as long as they are able to meet their through-put and outcome targets, meet or exceed our quality control and cost-containment requirements and maintain adequate customer satisfaction ratings; excellence is well rewarded.

Of course, there are some who criticize us on the grounds that physicians no longer have the freedom they once “enjoyed” and that they are responsible more to the corporation than to the patient. Our view remains the same as ever: quality control, cost-containment and patient satisfaction are not mutually incompatible. Indeed, our client satisfaction surveys and focus groups confirm this opinion, whereas our in-house Ethical Practice and Professional Standards Review Board — reporting directly to the president — ensures that complaints are addressed (and settled) swiftly, before they escalate into costly and damaging legal problems. In this we are helped by effective, professionally directed consumer advocacy groups, whom we see as useful partners in providing us with input and feedback on what the customer wants.

So all in all, a good year. And now I am ready to take questions about our financial performance.

Scenario 3 — In failing health

Synopsis

This scenario is characterized by a bleak outlook, both economically and socially. Unemployment and crime rates are high, and Canada is in a period of rapid social decline due to a shrinking tax base and the depletion of our resource-based industries. Demand for health and social services is outstripping government's ability to pay for them and, as a result, several provinces have discontinued public funding of health care, paying only for seniors and those receiving public assistance. Those who can afford it depend on a tightly regulated private health care system that emphasizes providing the most effective care using the most efficient set of personnel and resources. The push to provide cheaper care has led to an increase in the number of nurses and “allied professions,” and increasingly doctors facing unemployment seek positions abroad. They have only limited success because the U.S. system faces many of the same problems and is responding in much the same way.

Hindsight is always 2020

[Report to the Standing Committee on Public Health from the Minister of Public Health, Mr. Saludo Decadente, World Health Day 2020]

As we all know, the past 20 years have not been kind to Canada — nor have we been kind to the planet. The threats to our ability to fund the health care system, and the threats to our health status, are very real. They say that hindsight is always 2020, so I want to share that hindsight for the benefit of future generations.

It is hard to point to any single cause for the slow decline that has brought us to the brink of the crisis we now face. Indeed, like the apocryphal frog in a beaker of warming water, for too long we failed to notice the warning signs around us. Economically, the process whereby we brought gifted immigrants to Canada to work on high-tech projects has reversed itself, as economic and social conditions have improved in immigrants' home countries, notably in the Pacific Rim and Latin America. Now our work goes out to them, using all the resources of our global telematics. At the same time, here in Canada, automation in the service sector has created high levels of unemployment. Falling revenues from taxes on income and wealth generation, coupled with increasing demands for health and social services as a conse-

quence of unemployment and social crisis, have led to a reduction in investments in education, reducing our capacity to compete internationally.

That capacity has also been weakened both by the increase in protectionism and by our failure to increase our energy efficiency as rapidly as our major competitors have done. We remain the highest per capita users of energy in the world, in a world where total energy consumption has almost doubled in the past 25 years. The results of this collective failure to reduce greenhouse gas emissions are now becoming apparent; indeed we are on the “worst case scenario” track predicted by the Intergovernmental Panel on Climate Change almost 25 years ago.

Our problems, dramatic though they may seem, pale in comparison with those experienced in many other parts of the world. Higher temperatures have enabled malaria-carrying mosquitos to expand their domain to encompass an additional 10% of the world’s population, for many of whom the new malaria vaccine will remain unavailable because of cost, at least for the foreseeable future. And who can forget the pitiable scenes of famine from Africa — the result of the combination of the massive population loss resulting from AIDS together with reduced rainfall and desertification — or the devastating storm surge in Bangladesh 2 years ago, the result of an unusually severe typhoon and higher sea levels.

Even more worrisome is the looming threat to food supplies as the American prairies dry out and their aquifers are drawn down, as the last commercial fish stocks are depleted and the latest rice virus devastates the monoculture crops of southeast Asia. The opportunity for the Canadian arable area to extend further north as a result of global warming has to be balanced, of course, against the drying out of our southern plains and the fires and destruction in our boreal forests.

Closer to home, our failure to heed the warnings of environmentalists is only too apparent. Our resource-based industries — fishing, forestry and agriculture — are all suffering from the unsustainable practices that we have continued until very recently, in the pursuit of narrow, short-term economic gain. The environmental, social and economic devastation that has resulted in some parts of the country initially triggered serious social unrest and even rioting, looting and a number of deaths. However, as the reality has sunk in, a sort of sullen hopelessness has replaced the rage.

High levels of unemployment have also resulted in social stresses, including high levels of crime and domestic violence, compounded by our declining capacity to invest in human services and policing. Moreover, there has been a disturbing rise in ugly

cases of racist backlash, particularly against immigrants from those countries that are now taking work from us. The resultant increased costs of policing have also reduced our ability to fund the “soft” human services. Tough times make for tough choices, and security comes first, be it domestically or internationally; hence the increased defence budget.

The cumulative effect of this spiral of environmental, social, economic and human decline is that, as it accelerates, we risk shifting from what has been, in effect, a slow disaster to a much more rapid one. The effect of all this on our present and future health status is serious.

Health status: There have already been significant effects of all these changes on health status, and there is a very real concern that things will get rapidly worse in the next decade or 2. For example, last year’s heat wave resulted in 650 heat-related deaths, mostly in Montréal and Toronto, while the persistent summer smog over our major cities has been responsible for an annual toll of hundreds of deaths, thousands of hospitalizations and millions of lost work days. In addition, although the greater frequency of severe weather events (ice storms, tornados, heavy rains and flooding) has caused few direct deaths so far, these events have exacted a dramatic social and economic toll at a time when we can ill afford such costs. Moreover, controlling the Asian Tiger Mosquito in our southern cities is a growing problem, and the prospects of a serious outbreak of dengue — as opposed to the minor outbreaks we’ve had so far — remains, while the threat of malaria reestablishing itself in Canada is still a worry, although less so since the first commercial malaria vaccine became available last year.

In an ironic twist, of course, the fact that we have had to shift to a more locally-produced, lower meat diet has been beneficial. Although heart disease mortality and other stress-related diseases have been increasing as a result of the high levels of unemployment and social stress, the low-fat, low-meat, high-fibre diet that we have had to adopt has helped to ameliorate the impact. Recent advances in pharmaceutical and surgical treatments have also helped, of course, although their benefit is restricted to those who can afford to pay for them, which is, sadly, a decreasing proportion of people, although not quite yet a minority. More disturbingly, not to say gruesomely, there is a continuing rumour of a growing illegal trade in spare body parts right here in Canada, as those who cannot afford the cloned spare organs seek cheaper alternatives.

Not surprisingly, we have seen significant increases in many forms of mental health problems (in particular, high suicide rates among the young and the

old) and high mortality and morbidity from alcoholism, addictions and violence. And although some of the depressive and other neurotic disorders are amenable to treatment with the new generation of neuropsychiatric medications, many of the problems associated with stress, poverty and personality disorder are not amenable, even if we could afford the treatments.

Perhaps the most eloquent indication of our parlous state is that the infant mortality rate, once as low as 5 per 1000, has now edged up to 12 per 1000 (and much higher in our poorer regions), with every indication that it will continue to increase. This is a powerful indicator of the deteriorating environmental, social and economic conditions that Canadians face, and helps explain why life expectancy has declined again for the 5th straight year.

Health care: As to health care, our resources are stretched to the limit. The decision of Alberta 6 years ago to discontinue the public funding of health care as a whole and to focus public support only on seniors and those receiving public assistance — in itself, a not inconsiderable proportion of the population — has had a domino effect, with British Columbia and now even Ontario following suit (Quebec, of course, in its new sovereign status, is no longer a recipient of federal funding anyway). In the newly amalgamated Maritime province and in Saskatchewan and Manitoba the picture is even more bleak, with only primary and community care funded universally, while hospital care is publicly funded only for seniors. In these provinces, the federal government has had to step in to provide hospital coverage for recipients of public assistance, while continuing to cost-share (at 30% levels) other publicly insured health care services.

Unfortunately, in the face of this economic slowdown, we have been forced to continue restrictions on funding of health care — which is now at 6% of GDP — given that there is no prospect of raising taxes any higher than they already are. Although our government-funded system is still able to provide basic care for most, the emergence of a private health care sector for those who are able to afford it has been unavoidable. But even there, money is tight and the emphasis has been placed on a tightly regulated system with emphasis on providing the most effective care using the most efficient set of personnel and resources — a major focus of corporate-funded research.

Under the circumstances, it is hardly surprising that the only part of the system that is thriving is the self-care sector, while home remedies and traditional therapies are widely used by those with little or no medical insurance. Given the depressing situation

many find themselves in, it is also hardly surprising that there is a thriving trade in a wide variety of “happy pills,” which has led to recent calls to legalize and tax them!

Wherever possible, of course, we have substituted technology for personnel, using the still considerable resources of the Compudoc system that was developed in the early part of this century. Although this cannot reduce the need for hands-on caring, it certainly enables us to provide a fairly high standard of telematic diagnosis, triage, treatment and referral at the primary and community care levels. But we can no longer hope to match the technological sophistication of the booming high-tech health care systems of the Pacific Rim — we wish we could.

One area where we have not stinted has been in the public health measures we have taken to protect Canadians from imported exotic diseases, drug-resistant bacteria and other threats to health. In these hard times, it has never been more evident that an ounce of prevention is worth a pound of cure. Of course, that prevention orientation carries over into the health care entitlements that we permit. Those who choose not to take advantage of the health protection and disease prevention measures that we offer, or who choose unhealthy life-style behaviours, quite rightly receive less coverage than those who do avail themselves of those opportunities. Here too, the legacy of the early part of this century in establishing comprehensive integrated health and other public information systems has been important, as it enables us to monitor people's health and behaviour.

As to personnel issues, the dramatic reduction in the number of medical school places has been somewhat offset by an increased number of nurses and allied professionals. The physician to population ratio is likely to decrease even more in the next few years as that part of the “physician boom” of the latter part of the 20th century who are still active begin to retire, although certain specialties (public health, trauma, infectious disease) will remain in high demand. Moreover, in the face of unemployment, Canadian health care providers have been seeking positions abroad or looking at ways of supplementing their incomes. Perhaps inevitably, therefore, an element of corruption has crept into the system, with under-the-counter payments to health care providers for quicker or better care and a black market in pharmaceuticals.

That is why I appear before you today, not just to set out this depressing litany of facts, but to set out the plans of my ministry as our contribution to the plans of our National Unity Coalition Government to address this national crisis. Just as we dealt with the Great Depression almost a century ago, so we can,

must and will put Canada back on the right track, starting today. So here, ladies and gentlemen, is the plan...

Scenario 4 — The 4th path

Synopsis

A remarkable change has occurred, brought on by cooperation between federal, provincial and territorial ministers of health who had the vision to establish the blueprint for a new, collaborative approach to health and social services in the early years of the 21st century. The Health for All Alliance comprises a unique blend of community organizations, health professionals, the business sector, labour unions and governments committed to the principle of creating a society of healthy people in healthy communities. Health promotion reigns supreme and as the population as a whole becomes more healthy, resources can be diverted from illness care to health-enhancement programs. Nowhere is this more evident than in the “community wellness centres” — erstwhile hospitals — that integrate birth, self-care and wellness centres, ambulatory care, telemedicine, respite care services and hospices. Early in life, children are taught the importance of leading a healthy life, as well as the skills needed for self-care, mutual aid and community participation, or “community skills” as they are now known. The increase in self-care has greatly influenced the training of health care professionals, who now place a greater emphasis on the determinants of health, the body’s inherent healing abilities and partnerships between professionals and their clients in the application of healing practices.

Health for all — the view from 2020

[Keynote speech at the 15th Anniversary Convention of the HFA Canada Alliance, given by the convener, Ms. Samantha Carter (This presentation was also Intelli-Net’d to the 5000 affiliated healthy community coalitions, health centres and organizations across the country, with SimulTrans into 45 languages, including 20 native languages)]

Today marks the 15th anniversary of a remarkable event, and presents us with an even more remarkable prospect — health for all Canadians. HFA Canada, I need not remind you, owes its origins to the series of hearings and public consultations that the federal, provincial and territorial ministers of health initiated in 2004, as part of the wider national discussion resulting

from a growing realization that our development path was leading us into deep trouble. These discussions were the beginning of a gradual but ultimately remarkable shift in societal values over the past generation or so.

Faced with a growing crisis in our ability to fund health care, growing public distrust of the uncaring and highly technical tertiary care orientation of the system as it then was, and a much greater public awareness of the broader life-style, environmental, social and economic determinants of health, the ministers of health — in a rare display of unity — decided that the whole system had to be rethought. As a result of skilled facilitation, excellent communications and a truly participatory personal and electronic consultative process, their report — *Health for all Canadians* — provided the blueprint that we are still working to implement today. The HFA Canada Alliance was established in 2005 to build on the remarkable consensus that had emerged and to ensure that the principles of the report were put into practice.

Our alliance represents a unique blend of consumer and community organizations, health professionals, the business sector, labour unions and governments. We remain committed to our founding principle — to create a society of healthy people in healthy communities and a health care system congruent with that vision. So today I want to take each of those elements — a healthful society, healthy people, healthy communities and the health care system — review our progress to date and contemplate the prospects for the next decade or so. But I need to begin by considering Canada and its health in a global context.

Canada and world health: It has never been more true that we live in a global community of national and regional “neighbourhoods” than it is today. The global Intelli-Net links us electronically, whereas Simul-Trans has enabled us to communicate with each other while maintaining our own languages, and with it our own culture and traditions. At the same time, global environmental, social and economic agencies work together and with national and regional governments to address matters of truly global significance. Connectivity, diversity and unity all flourish together!

Globally, the intelligence-based economy has enabled us to develop and use products and provide services in ways that not only have minimal impact on the environment, but that also contribute positively to social well-being. In part this was due to the new ways of measuring national wealth and economic activity developed by the World Bank in the early 21st century and incorporated in the UN’s Human Development Index. As a result, the most successful country — Costa Rica — was the one that had the highest level of human and social capital and the

highest net domestic product (GDP minus the negative effects of economic activity) per hectare of ecological footprint. This became known colloquially as “the national health.”

A healthful society and healthy communities:

Perhaps the most important step undertaken in Canada was to recognize that if Canada wanted to regain its status as the number 1 ranking country on the UN’s new Human Development Index — a position from which we had slipped when it was revised in the early part of this new millennium — we would have to make “national health” our priority. This meant we had to focus on not just the health of Canadians but their level of education, creativity and innovation. It also meant recognizing that economic development, while a necessary but not sufficient precondition for a healthy population, also had to be a form of economic development that does not deplete the natural and social capital upon which health and human development ultimately rests. The fact that the business community — recognizing that its economic success ultimately rests on a healthy environment, a stable society, caring communities and resourceful people — was a part of this consensus meant that the concept of “investing in health” acquired real significance.

As a result, the so-called ethical or green investment funds that were such minor players 2 decades ago are now among the largest and most profitable investment funds in the country. Moreover, the values we grew into so closely resemble those of the First Nations that they have become valued counselors and guides in many situations, which has benefited their own well-being as both individuals and nations.

Of course, it has not been possible to repair the environmental ravages of the 20th century overnight, and we are still facing challenges around global climate change, resource depletion, ecotoxicity and loss of biodiversity. But the commitment to a green economic recovery has begun to pay dividends, not just in the dramatic shift to renewable energy systems and clean industry, but in the new economic opportunities that these initiatives have created. And in the area of social development, we have learned to invest early in health, by ensuring that pregnancies are healthy and that early childhood development results in well-nourished, healthy, competent youngsters with a high sense of self-esteem — the foundation of our future healthy nation.

Our focus on human development has also meant a focus on reducing the unacceptable inequalities in health and its determinants that existed at the turn of the century. We came to realize not only that our society’s worth and values were reflected in how we dealt with our most vulnerable citizens, but that given the right opportunity they represented a

tremendous asset that we were wasting. A concerted effort to reduce poverty, invest in children and ensure a meaningful role and a decent income for all — especially our elders — has begun to pay off.

This process was greatly aided by the introduction, in 2011, of the Citizens Income, which made it possible for individuals to take a chance on developing innovative new knowledge-based and community-based services (including food production and artisan-type production of goods) without risking personal bankruptcy. The Citizens Income has also freed up a huge amount of time, energy and creativity for what used to be called volunteering, but is now seen as Citizen Service.

The focus on health and human development has been greatly aided by significant government reforms, most notable of which is the establishment nationally and in each province and territory of a First Ministers’ Council on Human Development. These councils, whose composition reflects the membership of this alliance, support research and provide advice about the coordination of government policies so as to maximize all 4 forms of capital simultaneously — human, social, economic and ecological. In this they are aided by the National Development Index (NDI), introduced in 2007 to replace the GDP, which enables us to chart our progress more accurately. (One sign of that progress is that the share of the NDI invested in illness care has now decreased to 7%, with a further 2% invested directly in health enhancement.)

The first ministers’ councils are replicated throughout Canada by similar Citizen Forums on Human Development in communities throughout the land. Most of these forums have established Healthy Community Coalitions in association with their local Community Health and Well-being Centres. As a result, we have begun to turn our communities around. Levels of participation have never been higher, as people learn that they truly do have the opportunity to be involved in decisions that affect their health, well-being and quality of life. With the advent of the Citizens Income in 2011, as a way of ensuring that all Canadians share in the benefits of automation and the reduced work week, local economic development initiatives have thrived, as have local volunteer projects, while policies and incentives to support healthy choices operate at the personal, community, provincial and national levels in the public, private and community sectors.

The result of all this progress is evident in the high levels of health we enjoy — physically, mentally, socially and ecologically.

The health care system: Consistent with the principle that society had to focus on health and human

development was the decision to redesign the health care system with the emphasis on health. This entailed a form of zero-based planning at all levels from the national to the local, in which we began with a blank slate and designed a health system, the first task of which was to keep people healthy.

Obviously, it was never going to be possible to simply replace the old model with the new one, but rather the goal was to describe what the system should look like in 20 or 30 years and then make sure that all decisions about the health care system were congruent with and moved us toward that vision. Over the past decade or more, in many but not all communities across Canada, we have been quite successful at shifting the emphasis toward health promotion, health protection, disease prevention, self-care and mutual aid, primary and ambulatory care and home and community care. And of course our citizens are much more engaged in setting the direction for their own community's health system, which has resulted in a wide range of health system designs.

Our Community Health and Well-being Centres — or hospitals as we used to call them — have truly become sources of health for the community. These multipurpose centres — often in themselves but one part of a complex or campus incorporating educational, recreational, cultural and information services — usually integrate birth centres, self-care centres, wellness centres, ambulatory care, telemedicine and respite care services, as well as a hospice. Here and at smaller neighbourhood centres, we can now avail ourselves of the services of a team of health professionals skilled at combining an appropriate mix of conventional and complementary healing practices. The much greater understanding we have developed in the last decade on how to harness the powers of psychoneuro-immunology through a combination of traditional meditative and biofeedback techniques and enhanced psychotelematic adjunctive therapy has had some remarkable effects not only in treatment but in prevention of a wide range of health problems.

Of course, the dramatic advances in telematics that we have seen over the past 20 years have contributed greatly to our ability to help people develop self-care skills and to bring care closer to home. From an early age children are taught not only the skills needed for leading a healthy life, but also the skills needed for self-care, mutual aid and community participation. These are all seen as “citizenship skills.” Access to the highly sophisticated National Compucare Program for self-diagnosis and self-care is almost universal, as is telemedical consultation with the local health centre and its primary and community care teams. The result is that a great deal of the

burden of minor illness is now competently managed by people in their own homes and communities, with professional in-put and advice when necessary.

However, this has not meant the disappearance of physicians and other healers and carers, although their role has in many respects been transformed. We are not, after all, a perfect society: we still sicken and grow old, we still have accidents and suffer from physical, mental or developmental disability — just less than we used to! And we still appreciate and value compassionate, caring treatment, skilled intervention (supported, of course, by sophisticated Cyberdoc software and Tele-health consultation) and the application of all methods that help us to feel better. A health guide who helps us in health and illness is still a valued resource!

Not surprisingly, this has had a dramatic impact on the education and training of health professionals of all sorts, as well as on their process of professional regulation, which is very open. Training is much more closely integrated; there is a much greater emphasis on the determinants of health and on the body's inherent healing capacities as well as the partnership between professionals and their clients in the development of self-care skills and the application of healing practices. These have become an important focus of experimentation and research, as has the appropriate use of technology.

Equally important has been the shift in our values as a society and as individuals, as we have come to appreciate not simply the length of life but the quality of life as a determining factor in the provision of health care. Well-informed and empowered citizens are able to make choices for themselves and for their loved ones that meet the criteria for what has been termed the ultimate form of health promotion — a healthy death.

Implications of the scenarios

Participants at the CMA Futures Policy Conference reviewed these 4 scenarios and discussed the implications of each for health, health care and medicine. Those discussions are summarized here.

Scenario 1 — The official future

This future was seen as relatively rosy, with people living healthier lives, with less morbidity, although not necessarily living a great deal longer. People are educated and motivated and are using the appropriate tools for enhancing their own health — part of a general shift toward increased responsibility of individuals. On the other hand, an emphasis on the lowest common denominator may lead to poorer health because everyone will receive *decent* care rather than *optimal* care. Moreover, our improvements were

made at the expense of the Third World, and environmental degradation may have an impact on the food chain. The income distribution in this scenario is very Canadian, but local variations in taxes and income may lead to increased health inequality and poorer health status. The 30-hour work week will require buy-in by both the public and private sectors.

The greater emphasis on self-care may be hampered by poor-quality information on the Internet, but technology will make self-care more possible and less expensive. As a result, there will be fewer health care providers overall, and physicians may end up as “technicians,” leading to a loss of the long-term patient-physician relationship. Questions of rationing will have to be decided by society; there is a question regarding to whom the health care team will be accountable (the individual patient versus the regional health authority) and who will become the gatekeeper. A major dependence on volunteers is evident.

With respect to the practice of medicine, there will be changes in the patient-physician relationship, with a diluted role for physicians and patients encouraged to self-diagnose and self-treat. Specialists will become even more specialized, but the responsibility for outcomes is unclear. Physician autonomy may be reduced, which may limit physicians’ ability to act in the patient’s best interests or to innovate. The physician’s role may be limited to that of team manager, advisor and “kicker” — not even the “quarterback.” This will have implications for physician training and education, including broader-based skills in management and information technology and a greater emphasis on disease prevention and health promotion. There may be fewer physicians trained overall. Information technology and the team approach may threaten the confidentiality of both patient and physician information.

Scenario 2 — The market triumphs

This scenario will result in an increase in marginalized groups in society, population subgroups suffering economic disparity and increased health inequities. The focus on the bottom line may make quality and health outcomes a casualty, as the system is accountable to the shareholders, not to society, the public nor the patient. The focus on controlling individuals precludes taking a broader societal view. This scenario assumes a shift in the core values of Canadians and a lack of focus on the broad determinants of health.

The fundamental principles of the current health care system are eroded in this scenario, the public system has gone bad because of scarce public resources. Although there is some system integration, evidence

is developed to support economic decisions rather than to promote evidence-based care, as the “bottom line” is the first consideration.

The implication for the practice of medicine is that the physician’s commitment is to the corporation rather than the patient, with medical training and practice subsidized, sponsored, driven and instituted by corporations. There is increased general practitioner’s specialist polarization, with these groups working in separate institutions or tiers and a narrow scope of practice. Self-governance is lost with the focus of employers on outputs and outcomes in pursuit of the bottom line. This scenario is incompatible with the art of medicine.

Scenario 3 — In failing health

The widespread environmental and socioeconomic crises in this scenario are already happening in parts of the world. Increased repression, increased stress from “ultimate capitalism,” increased inequity, decreased democracy, increased fundamentalism and increased social stratification would all contribute to a decrease in health status and a wider health gap between rich and poor. On the positive side, there may be some benefits in terms of increased supportive and communal living, increased creativity to deal with the various crises and increased religiosity and spirituality providing a sense of meaning and purpose.

In the health care system, the 5 principles of medicare have been abandoned and a multi-tier system has emerged. Libertarianism triumphs over egalitarianism in the provision of health care, and there is emphasis on increased self-care, home remedies and palliation. There will be a decrease in physician numbers, and in professionalism, with rigid and restrictive fiscally based guidelines in place. Physician values are challenged, as is physicians’ own well-being. Moreover, government intrusion into personal, confidential health information in data banks make it possible to sanction those with poor life-styles in the public system.

There will be little or no organized medicine and it is unclear who will set standards of care, license physicians or set ethical and disciplinary guidelines. There are fewer physicians, with some leaving for other countries and the rest remaining in cities. Although a commitment to the ethical basis of medicine remains, the research ethic will flounder; physician autonomy will increase and their accountability decrease. There may be an increase in the number of general practitioners and in some specialties, in particular infectious diseases and community medicine. Interestingly, the patient-physician relationship may actually improve as mutual dependency increases, although there is also increased potential for violence against physicians.

Scenario 4 — The 4th path

In this scenario, the entire political and social system (including corporations) supports health, and there is a form of consensual politics. Public empowerment and public participation is balanced with responsibility, while sustainable income levels contribute to good health. The improved overall quality of life, and in particular a healthy start to life, means that the level of health approaches the World Health Organization's definition of health. Social determinants are more important than genetic determinants in this scenario.

In the health care system, there has been a realignment of resources to promote collaboration in the training and practice of health care providers and participatory care with patients. There is an increase in the variety of providers, which increases the poten-

tial for competition among them. Various forms of regulatory bodies are implementing new methods of accountability compatible with this approach, recognizing the shift in emphasis and roles within medicine. The health care delivery system is diversified, meaning that the national principles of medicine may be challenged at a local level. There is an increased reliance on both technology and self-care, which may or may not be beneficial.

Given the assumptions in this scenario (people will choose healthy life-styles, there will be "someone" at home, people will work collaboratively for the good of the whole), the physician's role will still be to provide human contact, deal with emergencies and deliver grassroots care and coordinate it. However, what sort of provider he or she will be is less clear.

5. Responding to the scenarios

In addition to discussing the implications of the scenarios, participants in the CMA Futures Project also identified themes that were common to all or several of the scenarios; indicated the probability or likelihood of a scenario becoming “the” future and the desirability or preferability of that happening; and detailed what they liked or disliked about each scenario. The last exercise was the basis for the set of value statements discussed in

section 6. In this section, we summarize the responses and develop a preliminary synthesis.

Identifying common and robust themes

Participants at the Alta Vista Forum, the JCC meeting and the CMA Futures Policy Conference

Table 2: Themes common to the scenarios as identified by participants at 3 events

Alta Vista Forum October 1998	JCC Meeting November 1998	CMA Futures Policy Conference February 1999
<p>Society The poor will always be with us, with worse health status The important role of the determinants of health, including the important impact of environmental change Technological forces Political accountability and role of government largely absent or unclear</p>	<p>Society Disparities and polarization Social network is important, support may be weakened Advances in information technology</p>	<p>(Society) Health Fundamental shift in values from today's Focus on determinants of health beyond medicine, especially environmental determinants Expanding technology Human behaviour (and how to shape it) an important driving force Value/importance of human contact Willingness to sacrifice individual for common good</p>
<p>Health care system The poor get more services Shift from institutional to community care Lack of vision and planning Increase in consumer involvement in decision-making Increased self-responsibility for health No citizen choice</p>	<p>Health care system Death is a reality, the rich get better care (in some scenarios) Progress in medical knowledge does not mean increased access to care A team approach Fragmentation of health care, loss of direction Commodification of health care Increase in self-care, patient involvement in care Loss of freedom within the patient-physician relationship Third-party interveners Competition (among providers)</p>	<p>Health care system Value of a publicly funded system Basic medicare principles are threatened Changes in professional boundaries/lack of clarity over where responsibility lies/ who will be the gatekeeper Increase in alternative providers Sophisticated health information systems A lot more self-care Importance of shaping human behaviour</p>
<p>Physicians/medicine Professional autonomy will diminish Doctors will change their roles</p>	<p>Physicians/medicine Physicians lose autonomy Fewer physicians Physicians are more responsive to the system Physicians change their roles, become technicians Few scenarios where MDs are better off</p>	<p>Physicians/medicine Erosion of professional autonomy Reduction in number of physicians Concern to maintain fundamental professional principles Sustained importance of patient-physician relationship</p>

were asked to identify themes that were common to all or most scenarios (Table 2). Elements that appear in all 4 — or even 3 — future scenarios are worthy of consideration in the shaping of any preferred future. These forces have a high probability of remaining influential unless special efforts are made to change those that are considered undesirable.

Certain themes and trends recur in the analyses of at least 2 (and in some cases all 3) of these groups. These particularly “robust” themes or trends are ones that the medical profession and the CMA should be prepared to live with and adapt to (but perhaps also try to influence). A summary of these robust themes follows.

Society

- Disparities will continue to exist; the poor are always there and have the worst health status.
- The determinants of health are important, especially environmental determinants and social networks.
- There will be a significant increase in the important role of technology, especially information technology

Health care system

- There will be a significant increase in self-care and patient involvement in care decisions.
- Disparities in the provision of care will exist; access and other Medicare principles will be threatened.
- There will be a lack of vision, sense of direction and planning.
- Fragmentation and lack of clarity over accountability will persist.
- There will be reduced citizen choice and limits on freedom and choice within the patient–physician relationship, with increased third-party intervention.

Practice of medicine

- Physician autonomy will be reduced.
- Physician numbers will be reduced.
- Physicians’ roles will change.

Exploring probability and desirability

Participants were asked their opinion about the probability or likelihood that a given scenario might occur and their preference or desire to see a given scenario occur. A gap between probability and preferability indicates the direction in which change should be sought and the amount of change that might be needed. A large gap between where people think we are headed and where they would prefer to go establishes a form of cognitive dissonance that might provide a spur to action.

Indeed, the Alta Vista Forum participants who looked at the “In failing health” scenario were so troubled by it that they felt moved to identify ways we could avoid this future:

- Increase collaboration among health care professionals; fund incentives to encourage this
- Provide clear leadership and a clear vision (national) that addresses economic, environmental, social and unity issues
- Reinforce the value of the collective
- Take a leadership role in (global) environmental issues; stop moving backward
- Health professionals address broader determinants of health — nationally and internationally
- Generate wealth in a healthy way
- Support education (lifelong learning, and re-tooling)
- Reduce disparities via taxes
- Change values and attitudes — change how we measure and evaluate
- Enable multiple roles, therefore multiple changes
- Encourage risk-taking; be proactive.

In all, 42 respondents to a *CMA News* survey and 68 participants at the November 1998 JCC meeting reflected on the probability and preferability of the 4 scenarios. These numbers are small and cannot be said to be representative of the CMA membership. Also, the 42 survey respondents looked at all 4 scenarios and responded to questions of “how likely” and “how desirable” they found the scenarios (rating them on a 5-point scale). The 68 JCC meeting participants were split into 4 groups, each looking at a single scenario and indicating its probability and preferability by making a mark on a scale from 0 to 100%. This information was interpolated into 5 quintiles to allow a rough comparison with the survey results. Despite these limitations, the results are important for the light they shed on the values and attitudes of this subset of interested physician leaders (Tables 3 and 4).

“The 4th path” scenario was generally seen to be unlikely, but it was clearly the preferred scenario, quite strongly preferred in fact. Not surprisingly, the “In failing health” scenario was strongly disliked; its probability tended to be rated very low, although clearly some felt it was somewhat likely. “The market triumphs” scenario was the next most unpopular; on the whole, it was also seen as very unlikely. Finally, “The official future” was indeed seen as the most probable scenario, although not overwhelmingly probable. There was considerable ambivalence in terms of its preference, with a slight tendency not to prefer it.

As in similar exercises with other groups, we may be headed in a direction that most people would not prefer, given a choice. Clearly this has implications for

the development of a vision and a statement about a preferred future for our society and health care system. There is a need to shift from the path that takes us to “The official future” to a path that takes us toward “The 4th path.”

Stating likes and dislikes

After identifying themes common to the 4 scenarios, participants at the JCC and the CMA Futures Policy Conference listed the things they liked or disliked about these themes (Table 5).

Society

With respect to society, JCC participants expressed a strong preference for universality, the common good and egalitarianism and a strong dislike for increasing disparity and a loss of social conscience, morality and humanity, as well as a dislike for coercion and victimization. But they also expressed a strong dislike for big government (the welfare state, socialism,

communalism), for decreased choice and freedom and for increased taxes. A clear dislike was also expressed for mediocrity, “dumbing down” and a lack of incentives for initiative, innovation and excellence; participants preferred an environmentally conscious society. JCC participants also said they liked good health, a high quality of life, a broad definition of health and a happy death and disliked reduced health status.

Policy conference participants liked the maintenance of fundamental values such as human contact, respect for life and equality; they were concerned about a loss of or change in such fundamental values. They particularly disliked the possibility of sacrificing the individual for the common good. Participants endorsed a focus on the determinants of health and wished to maintain the principles of the *Canada Health Act*, disliking threats to those principles. They also liked the concept of shaping human behaviour, but disliked a loss of choice.

Health care system

JCC participants expressed a preference for increased patient involvement, personal responsibility,

Table 3: Ranking of CMA scenarios in terms of likelihood and probability

(SURVEY RESPONDENTS) LIKELIHOOD	(JCC PARTICIPANTS) PROBABILITY
SCENARIO 1: OFFICIAL FUTURE	
highly unlikely: 12 %	0 - 20 % probable: 20 %
unlikely: 15 %	21 - 40 % probable: 7 %
undecided: 28 %	41 - 60 % probable: 40 %
likely: 40 %	61 - 80 % probable: 26 %
highly likely: 5 %	81 - 100 % probable: 7 %
SCENARIO 2: MARKET TRIUMPHS	
highly unlikely: 7 %	0 - 20 % probable: 6 %
unlikely: 38 %	21 - 40 % probable: 33 %
undecided: 21 %	41 - 60 % probable: 33 %
likely: 29 %	61 - 80 % probable: 17 %
highly likely: 5 %	81 - 100 % probable: 11 %
SCENARIO 3: FAILING HEALTH	
highly unlikely: 10 %	0 - 20 % probable: 29 %
unlikely: 27 %	21 - 40 % probable: 64 %
undecided: 25 %	41 - 60 % probable: 7 %
likely: 33 %	61 - 80 % probable: 0 %
highly likely: 5 %	81 - 100 % probable: 0 %
SCENARIO 4: FOURTH PATH	
highly unlikely: 25 %	0 - 20 % probable: 50 %
unlikely: 20 %	21 - 40 % probable: 50 %
undecided: 15 %	41 - 60 % probable: 0 %
likely: 20 %	61 - 80 % probable: 0 %
highly likely: 10 %	81 - 100 % probable: 0 %

self-care and the community's determination of priorities. They liked the increase in technology, especially information technology, and a focus on effectiveness and prevention, resulting in better care and decreased waiting lists (the latter presumably aided by increased funding). Participants also liked the concept of team care or integrated care and disliked fragmentation, multiple providers and an increase in number of "pseudo-MDs." They also expressed a dislike for increased bureaucracy and regulations. There was a concern about underinsured patients, customer gouging and increased bad debts.

In their consideration of the health care system, participants at the policy conference expressed a strong liking for a strong and adequately public-funded system and for the maintenance of health care services and access to them; they indicated a dislike for inadequate or limited funding and a monopolistic system. Participants were strongly in favour of individuals assuming greater responsibility for health, but disliked the potential of this to result in inadequate or no care provision. They liked the potential for sophisticated

information technology systems, but were concerned about the potential loss of autonomy, threat to privacy and potential for abuse that these systems might hold. Participants also liked the availability of better technology for health care, but disliked the potential for technology to dehumanize care.

Participants at the policy conference also liked the team approach to health care provision, with the physician as leader or gatekeeper and the establishment of clear team roles and responsibilities (boundaries). They expressed a dislike for ambiguity with respect to roles and accountability in teams and the role of nonphysician gatekeepers. Although expressing a liking for alternative or complementary providers as an adjunct, participants disliked the lack of regulation of professionals, including alternative providers, and the lack of an evidence base for alternative or complementary therapies. They believed that all providers should be competent and regulated. Finally, they expressed a liking for an holistic approach and an emphasis on the psychosocial and spiritual elements of health.

Table 4: Ranking of CMA scenarios in terms of desirability and preferability

(SURVEY RESPONDENTS) DESIRABILITY	(JCC PARTICIPANTS) PREFERABILITY
SCENARIO 1: OFFICIAL FUTURE	
highly undesirable: 21 %	0 - 20 % preferable: 24 %
undesirable: 17 %	21 - 40 % preferable: 53 %
undecided: 26 %	41 - 60 % preferable: 23 %
desirable: 19 %	61 - 80 % preferable: 0 %
highly desirable: 17 %	81 - 100 % preferable: 0 %
SCENARIO 2: MARKET TRIUMPHS	
highly undesirable: 58 %	0 - 20 % preferable: 17 %
undesirable: 30 %	21 - 40 % preferable: 28 %
undecided: 9 %	41 - 60 % preferable: 28 %
desirable: 3 %	61 - 80 % preferable: 22 %
highly desirable: 0 %	81 - 100 % preferable: 5 %
SCENARIO 3: FAILING HEALTH	
highly undesirable: 55 %	0 - 20 % preferable: 100 %
undesirable: 31 %	21 - 40 % preferable: 0 %
undecided: 5 %	41 - 60 % preferable: 0 %
desirable: 0 %	61 - 80 % preferable: 0 %
highly desirable: 0 %	81 - 100 % preferable: 0 %
SCENARIO 4: FOURTH PATH	
highly undesirable: 3 %	0 - 20 % preferable: 11 %
undesirable: 10 %	21 - 40 % preferable: 33 %
undecided: 10 %	41 - 60 % preferable: 39 %
desirable: 28 %	61 - 80 % preferable: 17 %
highly desirable: 49 %	81 - 100 % preferable: 0 %

Table 5: Summary of key preferences of participants at the JCC and CMA Futures Policy Conference

Participants like a society that	<ul style="list-style-type: none"> • Maintains fundamental values of universality, egalitarianism and the common good • Respects life, freedom and choice • Has a social conscience and values human contact • Shapes human behaviour while eschewing coercion, victimization and loss of choice • Moves away from big government, the welfare state, increased taxes and the sacrificing of the individual for the common good • Focuses on the determinants of health • Is environmentally conscious • Has a high health status and quality of life
Participants like a health care system that	<ul style="list-style-type: none"> • Maintains the principles of the <i>Canada Health Act</i> • Is publicly funded in an adequate manner • Encourages self-care, personal responsibility, patients' involvement in care decisions and public involvement in setting community priorities • Employs sophisticated technology, including information technology, while guarding against dehumanization and threats to privacy • Focuses on prevention • Focuses on effectiveness and evidence-based care • Employs a team approach within systems of integrated care, with the physician as leader or gatekeeper • Has clearly defined team roles, responsibilities and accountability • Ensures that all providers, including alternative or complementary providers, are competent, regulated and practise evidence-based care • Avoids increased bureaucracy, regulations and a monopolistic approach, while also avoiding fragmentation
Participants like medical practice in which	<ul style="list-style-type: none"> • The maintenance and strengthening of the patient-physician relationship and the personal touch are fundamental • The physician plays the role of team leader • A holistic approach to the practice of medicine recognizes the psychosocial and spiritual elements of health • Physicians enjoy a good quality of life • Medical ethics, values and principles are maintained • A strong <i>dislike</i> was expressed for the potential loss of physician autonomy, power, self-regulation and for a reduced number of physicians

Physicians and the practice of medicine

JCC participants indicated a strong dislike for reduced physician power, autonomy and numbers; a dislike for increased competition among physicians was also expressed. Participants were concerned about a loss of the patient–physician relationship and the personal touch, as well as the loss of primary care. A liking was expressed for a better physician life-style, including issues such as salary perks, paid continuing medical education and pensions, as well as increased opportunities for physicians and the ability for physicians to focus on medicine.

Policy conference participants expressed a strong liking for the sustained importance of the patient-physician relationship, and were concerned about the potential loss of the role of medicine as a personal

service, either as a result of increased stress resulting in a “human contact gap” that will be filled by alternative care providers or because the team approach might result in a decline in patient-physician relations. They also expressed a strong dislike for the potential loss of physician autonomy and self-regulation and for a reduced number of physicians.

Participants liked the role of the physician (particularly the family physician) as team leader, gatekeeper or quarterback, but disliked the concept of gatekeeper if it is purely a fiscal role, or where accountability is unclear. They expressed a liking for the maintenance of physician values and principles, such as respect for others, and for the maintenance of public interest above self-interest. They disliked inflexible medical education and early specialization.

6. Values and vision: toward a preferred future

The likes and dislikes (listed in the previous section) formed the basis for the following set of value statements, which were validated at the April 1999 JCC meeting.

Societal values

- Society in service to humanity
- A society based on equal rights
- Respect for individuals
- A broad approach to health and its determinants
- Personal freedom and choice
- Excellence, initiative and innovation
- Active participation of physicians in decisions about health and well-being

Health care system values

- A strong, sustainable, well-funded public system of health care that emphasizes prevention; high-quality, effective treatment; and care accessible to all
- A high level of personal involvement in, and responsibility for, health and health care
- A team approach to the provision of health care and clarity with respect to roles and accountability
- The application of sophisticated technology, including information technology, in health care
- A sustainable, highly qualified health care workforce with opportunities for career development and life-long learning
- Alternative or complementary health care providers, as long as all providers are competent, regulated and provide evidence-based care
- Active participation of physicians, in cooperation with others and in the interests of patients, in decisions about health care policy

Values in medicine

- The patient-physician relationship, based on trust, compassion and mutual respect
- The responsibility of the physician to act in the best interests of the patient

- Physician autonomy and accountable self-regulation of the profession
- The physician's role as leader of the health care team
- High ethical, clinical and educational standards
- Quality of life for physicians
- The physician as a healer, understanding that healing incorporates mind, body and spirit

These value statements represent the views of a significant group of leaders within the CMA and provide the basis for discussion of a preferred future, especially when linked to the statement of a vision for the future of the medical profession approved by the CMA Board in August 2000 (see box below; see also Appendix A).

A vision for the future of the medical profession

“Medicine will continue to be a profession dedicated to serving humanity. Its cornerstone will continue to be the relationship of trust between the patient and the physician. It will uphold with integrity the values of respect for persons, compassion, beneficence and justice. It will strive for excellence and incorporate progress in its art and science. It will maintain high standards of ethics, clinical practice, education and research in order to serve patients. It will encourage the development of healthy communities and of practices and policies that promote the well-being of the public. It will demonstrate its capacity for societal responsibility through self-regulation and accountability. It will actively participate in decision-making regarding health and health care policy. It will guard against forces and events that may compromise its primary commitment to the well-being of patients.”

A preferred future

A preferred future is based on the values of the people and organizations who craft it (in this case, primarily, a key segment of the medical profession). It can be relatively unchanged from the present or radically different. It can follow the present dominant trends or it can oppose them — the latter presupposes some ability or intent to “bend the trend.” The more the preferred future is radically different from the present (and from the “probable” or “official” future) and the more it “bucks” the trend, the more audacious it is. Audacious preferred futures (or visions) are not unattainable; they are merely more difficult to attain and may require bolder and more risky strategies to achieve.

In developing a preferred future, we must take into account the basic values of the profession; the major trends and driving forces at a societal level (as the health care system of the future will reflect the society of which it is a part); and the creation of goals that, while audacious, are not implausible. Clearly, crafting a preferred future is a complex task and one that, in some respects, is never finished.

The benefits of developing a preferred scenario include:

- It is important for the profession to know where it wants to be and in what direction to head — what policies and activities to encourage, which ones to discourage — if it wants to get there.

- A preferred scenario provides a starting point and a stimulus for discussion within the profession and with the wider constituency of partners in the health care system and society.
- A preferred scenario presents the profession’s values and vision to the world.

Although there is some merit to the idea that the CMA should develop its own preferred scenario, this may be premature because a vision for health, health care and even for medicine that is to have any weight beyond the CMA membership is going to require the participation and “buy-in” of a much wider array of stakeholders. Health and health care are clearly issues that extend well beyond the realm of the medical profession.

Getting there from here

Even though participants in the CMA Futures Project did not wish to develop a preferred scenario in isolation from other stakeholders, they did consider the role of medicine in encouraging the identified “likes” and discouraging the “dislikes.” Table 6 summarizes the actions that the profession — physicians individually and collectively through their medical organizations — can undertake to help create a future more congruent with the values and vision described earlier. Although these actions have not been formally adopted by the CMA, they illustrate the next step in the process of futures work — coming back to today and figuring out how to move to a preferred future.

Table 6: Action steps for the medical profession

Society

- Become actively involved with health care professional and public partners in lobbying, advocacy and policymaking to create a healthier society and healthier communities. These activities include:
 - addressing the environmental, social and other economic determinants of health
 - identifying the health implications of public policy
 - developing a professional position on these issues.
 - Work to understand the public's issues, concerns and priorities and become aligned with the public.
 - Communicate better with the public with respect to medicine's values and commitment to health and the public good.
 - Help educate the public about health and its determinants and about health care.
-

Health care system

- Support an adequately funded public system that is accessible to all.
 - Hold governments accountable for their commitments to the Canadian public and the terms of the *Canada Health Act*.
 - Lobby to broaden the national medicare program to include pharmacare and medical devices.
 - Encourage and support teamwork, alternative models of care and alternative payment systems.
 - Encourage and support self-care and mutual aid.
 - Define levels and standards of evidence-based care that will protect and improve the health care system.
 - Undertake research on evidence-based care, including outcome, cost-effectiveness and alternative therapies.
 - Lead public debate on effectiveness, efficiency and reasonable expectations of health care.
 - Seek open accountability for all health care providers (including the private sector) and promote professional self-regulation.
 - Establish dialogue with other providers with respect to the roles and scopes of practice of health care providers.
 - Work with the Canadian Medical Protective Association to address issues such as collaborative care, accountability and responsibility.
 - Seek to reduce constraints on physician mobility and practice.
 - Ensure that privacy is protected as the use of information technology increases.
-

Medicine

- Maintain and promote the *Code of Ethics* and reaffirm the profession's values and principles.
- Strengthen the patient-physician relationship by
- promoting caring and the art of medicine
- focusing on the whole person and the physician's role as healer
- stressing the physician's role as protector and advocate for individual patients.
- Develop the role of physicians as coordinators and team leaders in integrated care teams, especially in primary care.
- Enhance the physician's role in health promotion, disease prevention and patient education.
- Help to increase self-care skills and capacity in the community.
- Lead in the development and assessment of information and other technology and in the discussion of ethical issues related to these technologies.
- Foster and demonstrate community, social and political leadership.
- Broaden medical education to meet these new or expanded roles.

Afterword:

doing your own futures work

Thinking about the future effectively, creatively and innovatively is something that can be done on different scales and over time frames stretching from a few hours to years. At the top end of that scale are efforts such as the United States Military Health Services System's futures exercise, which spanned several years and involved hundreds, if not thousands of people on bases around the world. At the other end of the scale is the individual physician who takes a few moments to read the 4 scenarios in *CMA News* and fills in the survey response.

In between, there are a number of opportunities for physicians and others to think about the future, ranging from a couple of hours work in a small group to organized sessions stretching over several months or in a 1- or 2-day intensive workshop. Participants can range from a few to dozens, even a couple of hundred. Ideally, participants should represent a broad range of perspectives both within and beyond the profession — the broader the range of perspectives, the more challenging but the more useful and interesting the discussions are likely to be.

Here are suggestions for ways to use the material and ideas in this report in various ways, depending on the time and resources available. These are not the only sorts of futures exercises that can be undertaken; they are based on the materials, approach and experience of the CMA Futures Project.

2 hours*

By circulating and reading the scenarios beforehand, a small group could

- Discuss the implications of each scenario for themselves, their institution or their community.
- Vote on or arrive at a consensus on both the probability and the desirability of each scenario being “the future.”
- Identify what participants like and dislike in each scenario.

- Synthesize the likes and dislikes to give some sense of a preferred and an undesirable future.

A half-day

If the group is large enough, 4 small groups could be created and each given one scenario and asked to discuss the implications, discuss the probability and preferability and identify likes and dislikes. A report from each group could lead to synthesis of likes and dislikes and a discussion about what needs to be done to avoid the undesirable future and create the preferred future.

Several meetings over a month or 2

This longer process might be suitable for a class or group coming together one evening a week or on some other regular basis. Several 2- to 3-hour sessions could consist of

- Discussion and identification of the major forces and trends shaping society and affecting health and health care in the future.
- Discussion of the 4 scenarios, either individually or as a whole, including implications, probability and desirability, likes and dislikes.
- Synthesis of preferences to create a set of values and the elements of a preferred scenario.
- Discussion of the preferred scenario and its implications.
- Discussion of action steps and strategies for change to avoid the undesired future and move toward a preferred future.

1- to 2-day workshop

A workshop could integrate the elements outlined for the weekly sessions into a full program. If numbers permit, dividing into 4 groups to explore the 4 scenarios makes for a richer discussion in each small group, although a mechanism for reporting back, sharing and synthesizing must be developed. It helps to have experienced facilitators for such a workshop.

*It may not be possible to do all of this in one session; a second 2-hour session may be needed.

Resources

The following are key organizations, people, books, journals and web sites that can introduce you to the study of the future.

Organizations and people — general

World Future Society (www.wfs.org): The World Future Society is a nonprofit educational and scientific organization of people interested in how social and technological developments are shaping the future. It strives to serve as a neutral clearinghouse for ideas about the future, including forecasts, recommendations and alternative scenarios. These ideas help people anticipate what may happen in the next 5, 10 or more years ahead. When people can visualize a better future, they can begin to create it.

Among the society's publications are *The Futurist*, a bimonthly magazine of forecasts, trends and ideas about the future; *Futures Research Quarterly*, a scholarly journal for the professional futurist; and *Future Survey*, a monthly digest abstracting scores of future-oriented books, articles and reports.

World Futures Studies Federation (www.worldfutures.org): WFSF is a forum for the stimulation, exchange and examination of ideas, visions and plans for alternative, long-term futures. The federation promotes and encourages futures studies as well as innovative interdisciplinary analysis and critique by promoting a higher level of futures consciousness in general; stimulating cooperative research activities in all fields of futures studies; planning and holding regional and global futures studies conferences and courses; and encouraging the democratization of future-oriented thinking and acting.

Organizations and people — health

Institute for Alternative Futures (www.altfutures.com): The IAF is a think-tank founded in 1977 by Dr. Clement Bezold, Dr. James Dator and Alvin Toffler. Its mission is to help people and organizations choose and create the futures they prefer. IAF's expertise spans an array of topics including architecture, anticipatory democracy, education, the environment, health care, information and communications, pharmaceuticals, and transportation. IAF has worked with organizations and communities, large and small, local and global. It is a leader in the development and effective use of scenarios and other techniques for understanding the future as well as techniques and processes for developing vision and audacious goals to help choose and create preferred futures.

Institute for the Future (www.iftf.org): IFTF is an independent, nonprofit research firm, specializing in long-term forecasting, alternative futures scenarios and determining the impacts of new products and next-generation technologies on society and business. For more than 30 years, it has forecast critical technological, demographic and business trends to help its clients plan for their future. For the past 16 years, IFTF has been a leading futures group in health care, providing forecasts of the direction and pace of change in this sector.

Kaiser Consulting (www.kaiser.net): Led by Leland Kaiser, a powerful speaker and thinker with a strong bent toward alternative values and approaches, this organization urges its clients to see the world in a new way and to embrace a new future shaped by the confluence of technology, e-health, spirituality, innovation, intuition, agility and the integration of ancient and futuristic approaches to healing.

Health Futures Inc. (www.healthfutures.net): For 18 years Health Futures has specialized in forecasting trends in medical technology, payment and public policy in health care. Its president, Jeff Goldsmith, is also associate professor of medical education in the School of Medicine at the University of Virginia. His interests include biotechnology, international health systems and the future of health services.

Books and journals, articles and reports — general

Books

Cornish E. *The study of the future*. Washington: World Future Society; 1977.

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Toffler A. *Future shock*. New York: Random House; 1970.

Journals, articles and reports

Future Survey Annual: Published monthly since 1979 and as an annual compilation by the World Future Society, this is a very useful and thorough guide to the recent literature of trends, forecasts and policy proposals.

Futures: The Journal of Forecasting and Planning. The leading scholarly journal in the field, published since 1968 in cooperation with the Institute for the Future.

Futures Research Quarterly. World Future Society.

The Futurist. Popular monthly magazine published by the World Future Society.

Books and journals, articles and reports — health

Books

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Rogers M. *Canadian Nursing in the year 2020*. Ottawa: Canadian Nurses Association; 1997.

Chapters and articles

Bezold C. Five scenarios. *Healthcare Forum J* 1992;35(3):28-35,37,39-42.

Bezold C, Hancock T. Health futures: tools for wiser decision making. In Bezold C, Mayer E. (editors). *Future care: responding to the demand for change*. New York: Faulkner & Gray; 1996.

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Hancock T. Beyond health care. *The Futurist* 1982;16(4):4-13.

_____. Seeing the vision, defining your role. *Healthcare Forum J* 1993;36(3):30-7.

_____. The global ecological crisis: implications for health care providers. In Bezold C, Mayer E. (editors). *Future care: responding to the demand for change*. New York: Faulkner & Gray; 1996.

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Some key resources for environmental scanning

General

Future Survey and Future Survey Annual — Published by World Future Society. See details above.

Health status and trends

World Health Report (www.who.int) — World Health Organization

Toward a Healthy Future: Second Report on the Health of Canadians — Released by the federal, provincial and territorial ministers of health in September 1999 along with complementary report (*Statistical Report on the Health of Canadians*) produced through a partnership of Health Canada, Statistics Canada and the Canadian Institute for Health Information. The 2 reports provide a picture of the most current information we have on the health of Canadians, and on the factors that influence our health. See also *Health Care in Canada: A First Annual Report*. Canadian Institute for Health Information, 2000.

Economic trends and forces

Canadian Economic Observer — Statistics Canada conducts numerous surveys on all aspects of the economy. (Catalogue number 11-010-XPB).

Organization for Economic Cooperation and Development (www.oecd.org) — Compiles and publishes a wide range of economic and statistical information for its 29 member countries.

Social trends and forces

Canadian Social Trends — Statistics Canada produces a wide range of information on social trends through the population census and a variety of periodic and occasional household surveys. (Catalogue number 11-008.)

See also *Canada 2005: Global Challenges and Opportunities* (www.policyresearch.schoolnet.ca) and the Trends project.

Demographic trends and forces

Annual Report on the Demographic Situation in Canada — Statistics Canada produces a wide range of information on sociodemographic trends in the population. (Catalogue number 91-209-XPE.)

Technological trends and forces

Health Forum Journal — Bimonthly publication from the Health Forum (a company of the American Hospital Association) that frequently publishes articles addressing the implications of new technology for the delivery of health care.

Foresight (www.foresight.gov.uk) — A UK government-led programme which includes a health care panel that is addressing issues such as genomics and information technology.

Environmental trends and forces

State of the World and Vital Signs — reports of the Worldwatch Institute (www.worldwatch.org)

World Resources Institute (www.wri.org)

Healthy Environments (www.hc-sc.gc.ca/hppb/healthyenvironment/) — Health Canada

An Overview of the Health Implications of Environmental Change — A Canadian Perspective. Environment Canada; 1997

Health and Environment — Rosalie Bertell, International Institute of Concern for Public Health. Paper prepared for the Rio+5 Forum (www.ecouncil.ac.cr/rio/focus/summary/social/health.htm)

Climate and Health — WHO (www.who.int/peh/climate/climate_and_health.htm)

Climate Change — Health Canada (www.hc-sc.gc.ca/english/climate.htm)

Canada Country Study on Climate Change — includes a chapter by Duncan et al. on health impacts (www.ec.gc.ca/climate/ccs/pdfs/volume7/vol7ch11.pdf)

Appendix A: CMA policy

“The Future of Medicine”*

In 1997 the Canadian Medical Association (CMA) embarked on a study of the future of medicine. Two premises guided this activity: (1) the pace of change in the practice of medicine that physicians experienced in the last quarter of the 20th century is bound to increase in the 21st century; and (2) it is essential that the medical profession position itself to influence future developments in medical practice.

In order to prepare the profession to anticipate and meet the challenges of the future, the CMA is engaged in a medium- to long-term (5–20 years) planning exercise. This policy statement summarizes the results of the first part of this exercise: working definitions of health, health care and medicine; a vision for the future of the medical profession; and the implications of this vision for the roles of physicians. This work was conducted by an expert project advisory group, which developed background papers on these topics and prepared this statement for approval by the CMA Board of Directors.

Definitions

Health: is a state of physical, mental, emotional and spiritual well-being. It is characterized in part by an absence of illness (a subjective experience) and disease (a pathological abnormality) that enables one to pursue major life goals and to function in personal, social and work contexts.

Health care: is any activity that has as its primary objective the improvement, maintenance or support of physical, mental, emotional and spiritual well-being, as characterized by the absence of illness and disease.

Medicine: is the art and science of healing. It is based on a body of knowledge, skills and practices concerned with the health and pathology of individuals and populations. The practice of medicine encompasses those health care activities that are performed by or under the direction of physicians in the service of patients, including health promotion, disease prevention, diagnosis, treatment, rehabilitation, palliation, education and research.

A vision for the future of the medical profession

Medicine will continue to be a healing profession dedicated to serving humanity. Its cornerstone will continue to be the relationship of trust between the patient and the physician. It will uphold with integrity the values of respect for persons, compassion, beneficence and justice. It will strive for excellence and incorporate progress in its art and science. It will maintain high standards of ethics, clinical practice, education and research in order to serve patients. It will encourage the development of healthy communities and of practices and policies that promote the well-being of the public. It will demonstrate its capacity for societal responsibility through self-regulation and accountability. It will actively participate in decision-making regarding health and health care policy. It will guard against forces and events that may compromise its primary commitment to the well-being of patients.

The roles of physicians in the future¹

Although the vision and values of medicine are enduring and will remain stable, the practice environment of physicians will change as the medical profession responds to health system and societal influences. This in turn will have implications for the roles of physicians.

The traditional role of physicians has been medical expert and healer. This has involved diagnosing and treating disease and other forms of illness, comforting those who cannot be cured and preventing illness through patient counselling and public-health measures. While this role will remain at the core of medical practice, the evolving context of health care requires physicians to assume additional roles to support their primary role.

The CMA proposes the following roles as essential to the future practice of medicine (cf. Fig. 1 for their interrelationship). Although no physician will function in all roles simultaneously, they should all have the fundamental competencies to participate in each of these roles.

- *Medical expert and healer:* Physicians have always been recognized for their role as medical expert and healer; it is the defining nature of their prac-

*Reprinted from the *Can Med Assoc J* 2000; 163:757–58.
All policies of the CMA are available electronically through *CMA Online* (www.cma.ca/inside/policybase).

ROLES OF THE PHYSICIAN



tice and derives from the broad knowledge base of medicine and its application through a combination of art and science. This is the foundation for continued physician leadership in the provision of medical and health care in the future.

- *Professional:* There must be renewed efforts to reaffirm the principles of the medical profession, including upholding its unique body of knowledge and skills; maintenance of high standards of practice; and commitment to the underlying values of caring, service and compassion. The medical profession of the future must continue to develop standards of care with ongoing opportunities for continued assessment of competency in order to remain a credible, self-regulated discipline worthy of public respect and trust.
- *Communicator:* Increasing emphasis will be placed upon the ability to gather and communicate medical information in a compassionate and caring fashion, to enter into a partnership with patients when organizing care plans and to provide important information through counselling and the promotion of health. As always, the patient-physician relationship will remain paramount, with its essential features of compassion, confidentiality, honesty and respect.
- *Scholar:* Scholarship involves the creation of new knowledge (research), its uniform application (clinical practice) and its transfer to others (education). It is this strong association with the science of medicine and physicians' willingness to embrace the scholarship of their practice that is closely linked to their roles of medical experts and professionals.
- *Collaborator:* Health care services will increasingly be provided by interdisciplinary teams throughout the continuum of care from health promo-

tion activities to the management of acute life-threatening disorders to the delivery of palliative care. In the role of collaborator, physicians recognize the essential functions of other health care workers and respect unique provider contributions in patient-centred health care delivery.

- *Advocate:* As the health sector becomes increasingly complex and interdependent with other sectors of society, it will be essential for physicians to play a greater role as health advocates. This may pertain to advocacy for individual and family health promotion in the practice environment; it may also relate to the promotion of improved health at the broader community level.
- *Manager:* In order to provide quality care, physicians of the future must be effective resource managers at the individual practice level, at the health care facility level and as part of the wider health care system.

In order to fulfil these roles and participate in communities as integral members of society, physicians need to lead balanced lives.

Physicians may sometimes experience conflicts among these roles. The CMA Code of Ethics specifies the basic principles of professional ethics for dealing with such conflicts.

Conclusion

The CMA has developed this vision for the future of medicine and the future roles of physicians to assist individual physicians and medical organizations to anticipate and prepare for the challenges of the next 20 years. The vision provides the profession with criteria for evaluating proposed changes in how medicine is practised and reaffirms the core values of medicine that must be upheld in whatever system emerges.

The CMA invites other organizations, non-medical as well as medical, to comment on the contents of this statement and its implications for health and health care. The CMA welcomes opportunities to dialogue with others on how the health care system can be improved for the benefit of future patients and society in general.

¹The section is indebted to the work of the Educating Future Physicians for Ontario (EFPO) project supported by the Associated Medical Services group, the Ontario faculties of medicine and the Ontario Ministry of Health, and the Canadian Medical Education Directions for Specialists 2000 (CanMEDs 2000) project of the Royal College of Physicians and Surgeons of Canada.

Appendix B:

Development of the scenarios

Scenarios from other futures exercises that influenced development of the CMA scenarios				
	The CMA scenarios			
	The official future	The market triumphs	In failing health	The 4th path
Canadian Foundation for the Americas ¹⁴	Wounded dolphin	Flight of the condor	Caged jaguar	Rising phoenix
Canadian Nurses Association ¹¹	The return of caring	Technology eclipses caring	Control, manage and measure	The transformation
Bezold ⁶	Business as usual	Buyers market	Hard times	Healthy, healing communities
Change Foundation/ Ontario Hospital Association ¹⁵	Evidence-based health care	Free market forces	Pessimistic future	Healthy communities
World Health Organization ¹⁶	Health for many (modest growth)	Healthy communities/ healthy markets	Health for a few	Healthy communities/ healthy markets
Institute for Alternative Futures ¹⁷	Steady innovation based on outcomes	Paradigm shifts accelerate innovation	Innovation stagnates	Innovation that moves beyond
Netherlands Scenario Commission on Future Health Care Technology ¹⁸	Technology on demand	Free market unfettered	Risk avoidance	Sobriety in sufficiency

Key elements used to shape CMA's scenarios				
A. Society				
Elements	The CMA scenarios			
	The official future	In failing health	In failing health	The 4th path
Example	Canada, Sweden	United States	Former USSR	"Green," civil (Costa Rica?)
Futures perspective	Hold steady, maintain stability, adapt	Rapid short-term change, opportunistic	Doom and gloom	Long-term sustainability
Societal ethos	"Peace, order and good government"	The "creative destruction" of the free market	Hang on grimly	Sustainable human development
Development focus	Social	Economic	Prevent or slow the decline	Human
Values	Collectivist	Individualist and corporatist	Survivalist	Communitarian
Economy	Pretty good, fairly equitable	Booming but inequitable	Failing, only elites okay	Pretty good, measured differently (NDI)
Immigration	Reasonably high, viewed positively	Dictated by the market's needs	Resented, rejected, diminished	Reasonably high, viewed positively
Unemployment	Fairly high, good employment insurance	Fairly high, poor employment insurance	Very high, little employment insurance	Everyone can play a meaningful role; citizen income available
Environment	Protected to a fair extent locally; high global impact	Protected to a fair extent locally; high global impact	Devastated	Valued and protected locally; declining global impact
Politics	Centrist, biggish government	Rightist, big business, small government	Weakened govt, polarised and internecine politics	More local and more participatory
Technology	Controlled, high	Relatively uncontrolled, high	Limited, appropriate	Liberates, high touch
Technophilosophy	If we can afford it we should	If we can, we should	We wish we could	Maybe we could but should we?
Warfare	Controlled, concern about terrorism	Local wars, big arms trade	Regional wars over resources	Outlawed effectively
% GDP spent on health	10%	12%	6%	7% of NDI on illness care, 2% on health enhancement
Health status	Good to adequate, for almost all	Good for most, poor for some	Poor for all except the elite	Good for almost all

B. Health care system				
Elements	The CMA scenarios			
	The official future	The market triumphs	In failing health	The 4th path
Overview of health care system	Gov't managed, fully integrated	Private > public, tight control except for elites	Core gov't public health and primary care; on your own for the rest; self-care	Local health and health care systems, community-based
Societal health care ethos	Decent care for all	The best care your money can buy	Protect health, provide the basics	Healthy people in healthy communities
Leader in health care change	Government	Business	Government	Consumers and professionals
Planning principles	Our "reasonable expectations" committee makes decisions	You can have anything you can afford	We can only afford the basics	We create healthy communities and healing environments to contain cost
Consumers	Managed	Marketed to	Discouraged	Informed
Co-payments	No	Yes	Yes	Patient service accounts
Coverage	Universal but somewhat limited in scope	Incomplete in coverage and scope	Core services, means and life-style tested	Broad range of services and providers
Public expectations	Reasonable	High/excessive (resigned if poor)	Low	Reasonable
Information technology in health care system	Nurse in a box	Doc in a box	What box?	Mom in a box
Pharmaceuticals and biotech	Extensive but not excessive, controlled	Lots of it, very high, at the frontiers, very available at a price	Moderate, protection-oriented	Moderate, prevention-oriented, focuses on natural/traditional remedies
Info systems	Extensive, regionally and nationally integrated	Extensive, <i>not</i> integrated (competitive)	Extensive, integrated, used to control	Extensive, integrated locally and nationally
Transplants	Organ cloning, so not needed	Organ cloning, so not needed	A black market operates	Organ cloning, so not needed
Alternative medicine	Accepted where shown to be cost-effective	Big new market, caveat emptor	Traditional/folk remedies widespread	Encouraged, widely used, part of the total approach
Patient power	Tolerated, fairly well informed	Powerful if informed	Threatening	Encouraged, highly informed
Medical organizations	CHCs, regional clinics, public HMOs	Corporate HIS, salaried MDs	Public clinics, private FFS is a struggle	Community-based HIS
Medical practice	In a gov't system, part of the team, freedom constrained by man, info systems	Ditto in a private system, technology dominates, "Death of the Guilds"	Constrained by limited resources & competition from cheaper providers	Diverse, health-oriented, part of team, high-tech as needed
Health profession/medical education	Not much change	More high-tech, more cost oriented, more students enrolled	Smaller numbers, focus on primary care	Prevention/health oriented, non-MD providers, etc.
Role of registered nurses	Enhanced where cost-effective	Enhanced where cost-effective	Key player because cheap	Enhanced role in the team

C. Health care issues				
Elements	The CMA scenarios			
	The official future	The market triumphs	In failing health	The 4th path
Birth	High-tech	High-tech, low-tech, natural — whatever you can afford to choose	Good basic midwifery	Natural and home-like approach
Childhood — otitis media	Highly effective	Highly effective but cost may deter the poor	Highly effective, but cost may deter the poor	Highly effective
Teen MVA	High-tech salvage and repair, within reason	High-tech salvage and repair, depends on coverage	Medium-tech salvage and repair	High-tech salvage and repair
Age 30 — Depression (F)	Effective psychopharmacy and neurochemistry therapies	Effective psychopharmacy and neurochemistry therapies	Wede variety of reasonably effective cheap therapies used	Wide range of effective therapies and social support
Age 50 — Acute MI (M)	Effective medical and surgical therapies when prevention fails	High-tech intervention is widespread, depending on coverage	Reasonable treatment is available for those who can afford it	Prevention emphasized, effective therapies available
Age 65 — Ca lung (F)	Effective treatment available	Effective treatment available	Reasonable treatment is available for those who can afford it	Effective treatment available
Age 80 — Arthritis	Reasonable medical and surgical options available	Lots of medical and surgical options available	Learn to live with it	Focus on prevention, effective treatment and social adaptation
Seniors	Cared for	RMSPs for the well off	Neglected	Engaged in self-care and mutual aid
Death and dying	Reasonable efforts made, but not heroic	Denied, fought against, postponed as long as you can afford it	Not much effort to postpone it, a relief to some	The quality of life, not its length is paramount
Euthanasia	Being debated	Available at a price	Unofficially encouraged	Available to those who wish

Ca = cancer; MI = myocardial infarction; MVA = motor vehicle accident; RMSP = registered medical services plan

Endnotes

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