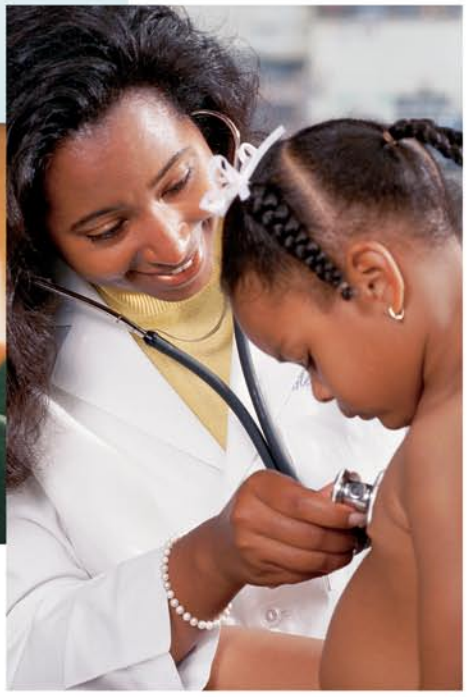
A Physician Human Resource Strategy for Canada

FINAL REPORT



MARCH 2006

A Physician Human Resource Strategy for Canada

TASK FORCE TWO

Une stratégie en matière d'effectifs médicaux pour le Canada

GROUPE DE TRAVAIL DEUX

A Physician Human Resource Strategy for Canada

FINAL REPORT

Prepared by:
Task Force Two:
A Physician Human Resource Strategy for Canada

March 2006

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EXECUTIVE SUMMARY

Timely access to qualified physicians has become one of the defining issues for Canada's health care system. The inability of growing numbers of Canadians to find a family doctor, long waiting lists for certain diagnostic and surgical procedures and acute shortages of various specialties in urban, remote and rural communities have all focused attention on how we conduct physician human resource planning in this country. Experience has shown that decisions made today will impact the delivery of health care a decade from now, since it can take five to 11 or more years of medical school and residency to train a doctor. Making the right decision is all the more challenging because of rapid changes to the way care is delivered, advances in technology, and the aging of the Canadian population (with its impact on both patient needs and the supply of physicians). In addition, these decisions have often been made independently by 14 federal, provincial and territorial jurisdictions in Canada, even though decisions made in one jurisdiction could seriously affect many others.

Faced with these challenges, Canada's medical community and the governments set out in 1999 to develop a long-term, pan-Canadian human resource strategy for physicians. **Task Force Two** was established to undertake an informed and consultative process to develop strategic directions that would ensure an adequate number of physicians working effectively and offering the right care, at the right time, in the right areas of the country.

The work of Task Force Two was guided by a Steering Committee composed of diverse health care professional associations, government representation from federal, provincial and territorial jurisdictions, the medical education community and lay representatives. This broad perspective on the issue helped ensure Task Force Two was integrated with the many other multi-stakeholder initiatives underway looking at the broader health human resource needs, such as the nursing sector study, the Advisory Committee on Health Delivery and Human Resources (ACHDHR), and the Health Council of Canada.

This report represents the final installment of Task Force Two's mandate. The work that began with comprehensive research into physician human resource trends and challenges in Canada has now culminated into the efforts of five working groups and more than 130 delegates at a national conference to carefully consider and apply the findings of this research. With this document, members of the Steering Committee of Task Force Two have refined and approved long-term strategies for five key aspects of physician human resources: education and training; interprofessionalism; recruitment and retention; licensure, regulatory issues and liability; and, infrastructure and technology.

Given the strong inter-relationship between these five areas, the strategic directions proposed in this document must be viewed as an integrated package. Selective action on certain strategies at the exclusion of others simply will not generate the results so needed by patients, health care professionals and institutions in this country.

Several themes run throughout the strategic directions and core strategies in all five areas covered in this report. Chief among these is the importance of improving the capacity of our health care system to adapt to change. The health care needs of Canadians and the way we deliver services in Canada are changing constantly, and these changes are not easily predicted. The health human resource planning approaches we use must be responsive and the system must be flexible enough to respond quickly. As we move forward in implementing the five strategic directions in this report, we must do so in a way that ensures our approach to education and training, promoting interprofessionalism, licensing and regulating physicians and addressing liability issues, recruitment and retention, and investing in technology and infrastructure all remain responsive and adaptive.

A second consistent theme is the need for a truly pan-Canadian approach to health human resource planning that is truly responsible to Canadians' changing health care needs. The gaps that currently exist between different health professions, between different principals within the health care system (i.e. education, regulation, funding, planning, etc.) and between jurisdictions must all be overcome if a truly integrated and effective approach to meeting the needs of Canadians is to be found and implemented.

Finally, a third theme that runs through all five strategic directions is the need for a lasting and ongoing effort to study, plan, implement and monitor Canada's physician and other health human resources in Canada to meet the needs of the population. In a sector as dynamic as health care, we simply cannot afford to react to shortages or surpluses when and where they arise. Task Force Two recognizes there is a need to improve Canada's ability to define and monitor the health needs of Canadians, the needs of providers (physicians and other health professionals) as well as those of the governments who fund the system. The health care system is dynamic and the answer to the question "How many doctors does Canada need?" will change over time, with organizational models, and be driven by economic, demographic, social, professional and technological forces. Accurately forecasting the resulting demand for, and supply of physicians in Canada will be essential to provide the health human resources we need in the future." The establishment of a permanent body or mechanism will help ensure the momentum generated by Task Force Two over the last five years, and other important initiatives, is not lost. The strategic directions and the coalition of health care stakeholders that contributed to their formation represent a valuable resource and Canada's health care system must now make the very most of them.

1. PREPARING FOR THE FUTURE – *EDUCATION AND TRAINING*

Attracting people to the medical profession is a starting point but Task Force Two recognizes that education and training will play a vital role in preparing the physician workforce that will be equal to the challenges of the future. Medical education at all levels – undergraduate, postgraduate and continuing professional development – will be instrumental in achieving and maintaining an optimal mix of family physicians and other specialists, working effectively where they are needed most. To this end, the Final Report of Task Force Two proposes the following Strategic Direction and core strategies:

> **Education and training of physicians and other health care providers throughout their professional life cycle must meet the needs of Canada's diverse populations.**
>
> ***Core Strategies***
>
> - To ensure that Canada can achieve and maintain a medical workforce in a responsible and ethical manner, plan and fund the requisite infrastructure and resources (human and non human) of the medical education, training and continuing learning systems, and make all components socially accountable.
> - Plan for flexible, responsive and interprofessional educational and continuous learning systems in which the curriculum and educational experience are linked to the needs of the populations served (including the under-served populations) and the needs of the providers.
> - Plan for an adequate number of ministry funded postgraduate positions to accommodate all graduates of Canadian medical schools, Canadian re-entry applicants and appropriately qualified international medical graduates (IMGs).
> - Plan an education and training system to create a physician workforce that reflects the population's diversity and needs.

The strategic direction and core strategies begin with the recognition that medical schools are accountable for ensuring the needs of Canadians are met in terms of the number of doctors in this country, their areas of specialization and the knowledge, attitudes and skill sets they bring to the profession. The report stresses that governments have a vital role to play in providing the funding needed to ensure our medical schools and continuing medical education programs are able to meet their obligations. The report also stressed the medical community's role in sustaining Canada's medical educational and health care systems.

The question of how many medical school and residency positions governments should fund in Canada was also addressed by Task Force Two. The report calls for an approach that ties medical school enrolment to a broader human resource strategy for physicians and for more information sharing across jurisdictions to ensure an integrated pan-Canadian approach. By increasing the number of ministry funded training positions, Canada's medical schools and teaching hospitals will be better able to respond quickly to changing needs,

allow physicians to re-enter the system in order to change their specialization to better meet the needs of society, accommodate appropriately qualified International Medical Graduates (IMGs) and repatriate Canadians who are graduates of international medical programs.

Finally, the strategic directions recognize that cultural communities within Canada have unique health care needs (including First Nations, Inuit and Métis) that may be best met by increasing the number of medical graduates from these communities. This will require adequate funding for medical schools and direct support to lower income families in these communities who might otherwise not be able to consider a medical education.

2. MAKING TEAMWORK WORK – *INTERPROFESSIONAL PRACTICE AND EDUCATION*

This report confirms Task Force Two's belief that bringing together physicians and other health professionals to work in teams can be an important part of the solution to challenges such as access to care, wait times for patients, shortages and burn out for professionals. As such, the report includes the following strategic direction and associated core strategies:

> **Interprofessional collaborative practice where physicians and other health care providers have clearly identified and valued roles.**
>
> ***Core Strategies:***
>
> - Create a culture for interprofessional collaboration.
> - Establish sustainable funding/remuneration models that support collaborative practice.
> - Evaluate on an ongoing basis the impact of interprofessional collaborative practice on patient, system and provider outcomes, and apply the findings to the planning process.

Simply bringing various health professionals together will not be enough to ensure true teamwork happens. First, a culture of trust between all health professions will need to be fostered, beginning with changes to the undergraduate and post-graduate curriculum and the way it is delivered to physicians, nurses and other health professions. Those professionals currently practicing will also need to adjust to working in teams and continuing professional development can help to create this new culture.

Health care professionals and the health organizations that depend on their services will need support as they adjust to new interprofessional ways of delivering care. In the past, too many promising models have failed to make it past the pilot project stage simply for lack of funding. Members of the Steering Committee agreed that the significant advantages of innovative, team approaches to health care far outweigh the resources and time needed to make them a reality in Canada. The Committee also maintains that all members of interprofessional collaborative teams should be appropriately and adequately remunerated

for the type and range of their professional activity. Finally, the report recommends that health human resource planners monitor the performance of interprofessional models of care over time to find the evidence that will help them select those models that deliver the optimal blend of health outcomes, patient satisfaction, provider satisfaction and productivity.

3. ATTRACTING PHYSICIANS AND KEEPING THEM HERE - *RECRUITMENT AND RETENTION*

As vital as the other four areas are to the success of a physician human resource strategy, the long-term impact of strategic directions in those areas will be limited by the ability to attract qualified people to the medical profession and to keep them in the profession for the duration of their career. In the face of an aging population, changing career expectations, and changing work conditions, the task has grown more challenging. The challenge is only deepened in an era of growing global competition for qualified physicians.

Faced with this challenge, Task Force Two has proposed the following strategic direction and accompanying core strategies:

> **A pan-Canadian approach is required for ongoing human resources planning for physicians and other health care providers. This approach must include needs-based factors and must incorporate a coherent and comprehensive recruitment and retention strategy.**
>
> ***Core Strategies:***
>
> - Designate a body or mechanism, with an appropriate analytical capacity, infrastructure support, and governance model to coordinate a pan-Canadian needs-based approach to HHR planning and development across jurisdictions in order to provide an integrated approach across all parts of Canada.
> - Address and develop special recruitment and retention measures to address the needs of groups where health inequities are evident such as for Aboriginal peoples, people living in rural, remote, northern and isolated communities, and where shortages of providers are predicted.
> - Focus on professional, personal, and intangible variables in addition to financial factors that impact on practice choices and practice locations, and support models of service delivery that recognize the full range of professional activities and attract and retain providers.

One of Task Force Two's strongest recommendations is for the creation of a permanent body or mechanism (possibly virtual) with the capacity and mandate to foster a pan-Canadian and integrated approach to health human resources planning, including the physician component. This body or mechanism would coordinate the efforts of planners across the

country, undertake much needed research and provide leadership and policy direction. Governments, educators, employers and professional associations will all benefit from an improved ability to identify emerging issues, better and more coordinated solutions and improved long-term planning. All these groups must be represented, in some form or another, in this new body or mechanism, along with regulatory bodies, students and residents, researchers, health authorities and specific cultural communities.

This body or mechanism would undertake important and ongoing research into the needs of specific communities and segments of the population. This research would then inform and foster efforts to address issues such as the lack of aboriginal physicians, rural shortages and the need to better represent the increasing diversity of the country in its medical workforce.

Finally, the report calls for an approach to recruitment and retention that addresses the range of social forces, personal needs and preferences that influence the career choices of current and future physicians. While much of our focus in the past has been on financial incentives, more attention needs to be paid to other factors such as lifestyle, professional recognition, flexibility and models of service delivery.

4. CLEARING THE LEGAL HURDLES – *IMPROVING LICENSURE, REGULATORY ISSUES AND LIABILITY*

Task Force Two recognized early in its work that promising advances in technology, models of care delivery, and recruitment and retention would only have limited effect unless they were accompanied by a modernization in the ways we license, regulate and deal with issues of medical liability in this country. In keeping with this finding, the following strategic direction and core strategies are proposed:

Complementary regulatory decisions that support both patient-centered practice and provider mobility.

Core Strategies:

- Develop a harmonized pan-Canadian process that ensures that licensure of physicians in every province/territory follows standardized practices.
- Develop a regulatory framework for interprofessional collaborative practice that incorporates risk management, quality assurance and quality improvement as continual processes.
- Develop a system that ensures availability of adequate liability protection and a clear accountability framework for every provider in a collaborative care setting.

Chief among these recommendations is a call for harmonization in the way physicians are licensed and regulated in the 14 jurisdictions that currently undertake this work. This harmonization should be extended to IMGs as well as practicing physicians and medical

graduates. The harmonization of standards and regulations must also be tied to a pan-Canadian health human resource strategy. That way, the specific needs of each jurisdiction and region can be considered and the poaching of physicians between jurisdictions can be minimized.

Task Force Two also understands that the promise of new models of care featuring interprofessional teams can only be realized if regulations and liability protection programs are modernized to account for the very different way medical care is delivered in these settings. The roles, rights, responsibilities and accountability of all players on the team must be clarified and reflected in the policies of regulators and liability protection programs alike. Failure to do so could seriously limit the extent to which health professionals adopt these new collaborative models of care.

5. MAKING THE MOST OF THE PHYSICIANS WE HAVE – *INFRASTRUCTURE AND TECHNOLOGY*

Finally, members of the Task Force Two Steering Committee agree that by improving Canada's health care infrastructure and making better use of available technology, our physicians will be able to work more effectively and meet the needs of more Canadians. That is why the final report includes a strategic direction and three core strategies focused on infrastructure and technology:

> **Ensure that critical components that support effective and efficient system delivery and interoperability are expanded to assist physicians and other providers to deliver quality health care at all practice sites and points of care in a timely manner.**
>
> ***Core Strategies:***
>
> - Develop a 'wired medical world' encompassing a wide range of interoperable communication and information technologies to support optimal information management, knowledge transfer, service delivery, and secure sustainable funding for the appropriate use of these technologies.
> - Create and maintain an up-to-date inventory of specialized medical equipment and technology and continue to invest appropriate funds to achieve the required future stocks.
> - Create and maintain an up-to-date inventory of physical infrastructure for both health provider education and health care delivery, and invest appropriate funds to achieve the required future stock of infrastructure.

The report notes that Canada's health care system has often lagged behind other countries when it comes to adopting new technology largely because the funds to implement the technology and train professionals have been lacking. Given the potential of technology to make the most of the health human resources we do have, the added investment is strongly recommended.

Decisions will have to be made around which technology to implement and what aspects of our health care infrastructure are most in need of investment. The report calls for these decisions to be guided by a new pan-Canadian inventory of medical equipment and technology and a pan-Canadian inventory of physical infrastructure for health care education and delivery. Together, these inventories would provide a clear and pan-Canadian picture of what is in place today, what gaps exist presently, and what conditions will be in the future. The inventories could also feature the findings of studies into the health benefits of new technology and infrastructure, along with success stories from similar investments across Canada.

In addition to this final report, Task Force Two has also issued other reports[i] over the course of its mandate, all of which have served to inform the strategies presented in this report. These are:

- ***Physician Workforce in Canada: Literature and Gap Analysis*** (January 2003)
- ***Assessing New Models for the Delivery of Medical Services: Inventory and Synthesis,*** (August 2003)
- ***Validating the Range and Scope of New Models for the Delivery of Medical Services*** **(**October 2004)
- ***Canada's Physician Workforce: Occupational Human Resources Data Assessment and Trends Analysis*** (February 2005)
- ***Health Care Delivery Models: Implications for Physician Human Resources*** (February 2006).
- ***Utilization Manual: Physician Human Resource Framework*** (March 2006)

i The reports are available from **www.physicianhr.ca** or from **www.rcpsc.edu**

TABLE OF CONTENTS

SECTION 1
INTRODUCTION AND BACKGROUND

1.1 INTRODUCTION: A COLLECTIVE CALL FOR ACTION

Physicians in Canada want to do everything they can to deliver the best quality health care to every Canadian. But that desire is not enough. With increasing pressure on health care resources the clarion call for change is paramount. Task Force Two: A Physician Human Resource Strategy for Canada was created to move beyond the rhetoric of health care renewal to provide in concrete terms the next steps that are needed to help ensure that the right kind of physicians, trained to offer the right kind of care, are working at the right time in the right parts of the country, with the requisite resources, to meet the population's health needs.

Capacity for change means leadership that articulates a positive vision of the future. Physicians are eager to participate in meaningful discussions with all stakeholders regarding the solutions outlined in this report but the time for action is overdue. The process of dialogue must begin in earnest to arrive at a collective agenda for action.

A priority of the five key strategic theme areas addressed in this report is the necessity of improving capacity to adapt to changes. The delivery of services and the need for those services in populations are dynamic concepts that cannot be planned for in the context of static institutional structures. Moreover, changes in the delivery of care and the need for services are not generally easily predicted. Hence, planning frameworks need to be responsive to change in a timely way. The principle concept that brings together provider supply and population need is health care services. Services respond to needs, and health care providers play a fundamental role in the delivery of those services. The precise nature of service requirements and the distribution of these services are constantly changing. Similarly, developments in service delivery and advances in technology mean

the production of services and the need for health care providers are continually changing. It is important therefore that the processes used for promoting education and training, interprofessionalism, recruitment and retention, licensure, regulation and liability and the effective use of technology and infrastructure be sensitive to these changes and together provide the appropriate capacities to enable the health care system to respond to change rather than constrain it.

The second common element of each of the five key strategic theme areas is the need for harmonization across professions and jurisdictions. Individual professions do not provide health care services in isolation, but play key roles in the production of services. Hence, the efficient delivery of high quality health care cannot be organized through the efforts of individual professional groups working alone. Interdependency between the different professions requires that provisions and processes for education and training, interprofessionalism, recruitment and retention, regulation, technology and infrastructure reflect the shared interests and needs of each of the professional groups and, ultimately, the public interest. For example, successful policies for recruitment and retention of physicians to work in remote areas may be compromised if the recruitment of other professionals (e.g., registered nurses, medical radiation technologists etc) is low and turnover rates are high.

Of equal importance is harmonization across jurisdictions. Constitutional arrangements set out in the 19th century apportion responsibility for health care primarily to provincial and territorial governments, and secondarily to federal government departments. However, 14 or more independent approaches to dealing with the delivery of health care services within one country may be inconsistent with the efficient use of health care resources in the 21st century. The European Union, increasing in size as its membership expands, is harmonizing processes dealing with training and practice in health care across its constituent nations.

Jurisdiction-specific policies are appropriate where systems of health care are completely separate. However, Canadian health care systems have a high level of interdependency. For example, larger, more prosperous provinces have greater capacity to train, attract and retain providers from less prosperous provinces. The ability of smaller provinces/territories to recruit and retain health care providers depends not only on their own policies, but also on the policies of other provinces/territories. Jurisdictional interdependence is not simply an external constraint on provinces. On the contrary, the defining federal legislation covering health care provision – The Canada Health Act – identifies inter-jurisdiction relationships as a key principle (portability of benefits). However, only limited attention has been given to harmonizing policies across jurisdictions in recognition of this interdependence to deliver the promise of Portability.

Holding each province responsible for the health care needs of its population might seem reasonable during ‘normal’ situations. But when a pandemic or other emergency occurs, it is not just the population of that province that is exposed to risk. Our ‘surge’ capacity to respond to such events requires that our ‘normal’ capacity to deliver care not be artificially restricted to politically-determined geographic boundaries that have no influence on epidemiological factors.

Jurisdiction-specific approaches to the delivery of health care generate many different situations that are difficult to justify. For example:

- Variations between provinces/territories in what a particular health care professional is authorized to do;
- Divergence in standards of care in different parts of the country;
- Training of particular health care professions occurring in each province/territory even though this may involve inefficiently small training programs; and
- Jurisdiction-specific recruitment involving competition for the same providers; each province/territory plans its delivery of service based in part on what is required to 'stay ahead' of the competition.

The foregoing are but a few of the arguments in favour of a collaborative approach to HHR planning. The September 2005 framework submitted by the federal/provincial/territorial Advisory Committee on Health Delivery and Human Resources (ACHDHR) also makes a number of other cogent arguments in support of Pan-Canadian collaboration.[1]

The following report outlines the strategic directions and the core strategies for physician human resources in Canada developed by Task Force Two at the conclusion of five years of research[ii] and broad consultation. Much like the directions established by the ACHDHR, the implications and the implementation of these strategies call for pan-Canadian and pan-professional collaboration.

1.2 REPORT STRUCTURE

This report is presented in 5 sections as follows:

Section 1 – Introduction and Background

The introduction sets the stage for the report and makes a collective call to action. Section 1 concludes with background information on Task Force Two.

Section 2 –The Process for Moving Forward: Strategic Directions and Core Strategies

Section Two first describes two overarching strategic recommendations emanating from the January 2006 National Conference on Physician Human Resources: (1) defining and monitoring population health needs and (2) creating a body or mechanism to help improve physician and other HHR planning in Canada. This section also explains how the following five strategic themes are inter-related and provides details on each of the strategies delineated under each theme: education and training; interprofessionalism; recruitment and retention; licensure, regulatory issues and liability; and infrastructure and technology.

ii The reports are available from **www.physicianhr.ca** or from **www.rcpsc.edu**

Section 3 – Next Steps

This Section describes possible next steps to bring some of the recommended strategies to fruition, namely the creation of a Transition Working Group.

Section 4 – Glossary of terms

Terms used in this report that may be less commonly known or that may be interpreted in different ways are explained in this section of the report.

Section 5 – List of Steering Committee Participants

Section 6 – References

1.3 TASK FORCE ONE: THE GENESIS OF TASK FORCE TWO

In 1998, the Canadian Medical Forum (CMF) – a forum of nine national medical organizations[iii] for consultation, consensus building, strategy development and joint action – created a self-funded working group named Task Force One to examine the shortage of physicians in certain disciplines and regions of the country. This CMF task force, which included both health professionals and lay representatives, worked to develop an immediate response to these specific physician shortages. The members of the task force analyzed the effects of the shrinking number of family physicians and specialists graduating from medical schools and the resulting projected shortfall of Canadian-trained physicians able to care for Canadians. The task force presented its final report and recommendations to the ministers and deputy ministers of health in November 1999. The recommendations of the task force were:

1. Increase medical school enrolment from 1,577 to 2,000 by the year 2000. This increase in medical school enrolment needs to be appropriately funded and free of coercion.
2. Increase efforts to retain and repatriate Canadian physician graduates.
3. Increase government-funded residency positions by 20% to increase flexibility, enhance re-entry and accommodate appropriately qualified international medical graduates.
4. Develop a formal and continuing process involving the Canadian Medical Forum, other health care providers, and federal/provincial/territorial governments to monitor and make recommendations on the number of entry positions for Canada's medical schools and postgraduate training programs on a regular (2–3 year) basis.
5. Address the issues of distribution and new models of delivery through cooperation of governments, health authorities, and educators.

iii The members of the Canadian Medical Forum are: Association of Faculties of Medicine of Canada, Association of Canadian Academic Healthcare Organizations, Canadian Association of Internes and Residents, Canadian Federation of Medical Students, College of Family Physicians of Canada, Canadian Medical Association, Federation of Medical Regulatory Authorities of Canada, Medical Council of Canada, Royal College of Physicians and Surgeons of Canada

These recommendations prompted a gratifying increase in medical school undergraduate enrolment; however, it was clear that much more remained to be done with respect to physician human resources planning as it was understood at the time that physician human resources planning should go well beyond simple head counts. The work of Task Force One thus led in September 2001 to the launch of "Task Force Two: A Physician Human Resource Strategy for Canada" – a 5-year human resource sector study of physicians. Its $4.8 million budget was funded in part by the Government of Canada's Sector Council program, Health Canada and the medical community through in-kind and cash contributions.

1.4 ABOUT TASK FORCE TWO

The collaborative effort of Task Force Two brought together an unprecedented partnership of Canada's leading health professional organizations, the Government of Canada, provincial and territorial governments and lay representatives to investigate and propose innovative long-term physician human resource strategies. The overall intent of the task force was to develop a strategy to ensure that the right kind of physicians, trained to offer the right kind of care, are working in the right parts of the country at the right time. The objectives of Task Force Two were set out as follows:

- Examine the range of existing and emerging models for the organization and delivery of medical care;
- Assess the long-term implications of these models on physician supply, educational approaches and training requirements to promote the optimal delivery of quality health care for Canadians;
- Develop options for a long-term human resource strategy that is sensitive to Canada's provincial and territorial realities.

The task force's work was overseen by a Steering Committee, co-chaired by The Royal College of Physicians and Surgeons of Canada, The College of Family Physicians of Canada and The Canadian Medical Association. The list of participants on the Steering Committee is under Section 5.

The objectives of the task force were translated into a three-phase workplan:

- Phase 1 consisted of an environmental scan / situational analysis that profiled the physician workforce and a review of new and emerging health care delivery models. The key outputs of this phase included a report entitled ***Physician Workforce in Canada: Literature and Gap Analysis (January 2003)*** and an inventory (searchable database) of new and emerging models of health care delivery and organization. A summary report of this latter aspect of Phase 1 was also produced entitled ***Assessing New Models for the Delivery of Medical Services: Inventory and Synthesis, (August 2003)***. The January 2003 study helped situate the task force's work by identifying, analyzing and critically assessing the available current and relevant information between 1990 and 2003 on the physician workforce and challenges it faces, and identifying gaps in the literature. The searchable inventory (updated in October 2004 in Phase 2) has provided a basis for further analysis and discussion by the task force throughout the other phases of its work and the development in Phase 2 of an

analytic tool, described below, intended to assist planners, providers and health care administrators to better assess how different types of health care models impact on physician resources in their own organizations.

- Phase 2 consisted of a comprehensive analysis of the issues impacting the supply of, and demand for, physicians. The report ***Canada's Physician Workforce: Occupational Human Resources Data Assessment and Trends Analysis*** **(February 2005)** analyzes the labour market for physicians and identifies priority human resource issues facing physicians today and in the future. The findings of this report provided an important foundation for the strategy development process. A validation study of the inventory of health care models developed in Phase 1 was also undertaken during this phase of the task force's workplan and included consultations with provincial and territorial governments, medical associations, specialty societies and other health care stakeholders. The findings of this study were documented in the report entitled ***Validating the Range and Scope of New Models for the Delivery of Medical Services*** **(October 2004)**. The final component of Phase 2 consisted of the development of an analytic framework intended to assist planners, health care administrators and providers assess the impact that various health care models have on physician human resources. This exercise entailed validating the proposed analytic tool through extensive interviews with health care administrators and other key informants, and visits to 10 health care sites across Canada predominantly identified from the inventory of healthcare delivery models described above. The case study process used to validate the analytic tool also enabled the researchers to identify preliminary findings in the area of physician recruitment and retention based on the health care models that were examined. These findings are synthesized in the report entitled *Assessment of* ***Health Care Delivery Models: Implications for Physician Human Resources (February 2006)***. The resultant analytic tool and supporting user manual are contained in a document entitled ***Utilization Manual: Physician Human Resource Framework*** (March 2006).
- The final and third phase was dedicated to strategy development. Informed by the environmental scan / situational analysis of Phase 1 and the physician labour market analysis of Phase 2, the task force struck five working groups to study key theme areas deemed central to physician human resource planning: education and training; interprofessionalism; recruitment and retention; licensure, regulatory issues and liability; and infrastructure and technology. Members of these working groups were from across Canada and various stakeholder groups and were selected based on their knowledge and previous work in the theme areas. The output of each of the working groups, including recommended strategies, was compiled and translated by the Steering Committee into draft strategic directions for physician human resources, presented for discussion at a national conference in January 2006. This conference brought together more than 130 delegates from 60 government and health organizations. At the close of the conference, all participants agreed that addressing the shortage of physicians in Canada and improving physician human resource planning would require concerted action.

This report is the culmination of five years of research, pan-Canadian consultations over that period and the January 2006 National Conference on Physician Human Resources.

SECTION 2
THE PROCESS FOR MOVING FORWARD:
STRATEGIC DIRECTIONS AND CORE STRATEGIES

2.1 THE NEED FOR A COHESIVE STRATEGIC APPROACH

The strategic directions and associated core strategies delineated in this report are the culmination of five years of sound collaboration, wide-ranging consultations and extensive research that spanned the three phases of the Task Force Two initiative. These strategies form a comprehensive framework to help address the ongoing physician resources challenges that have long troubled the country and form the basis for the longer term.

Given the strong inter-relationships between them, **all strategies must be viewed as a cohesive package**. Selective action on specific strategies to the exclusion of others will have sub-optimal results. The following are a few examples of the tight inter-relationship between the strategies presented in this report:

- the success of efforts to bring physicians and other health professionals to work in interprofessional collaborative teams to address a number of wide-ranging challenges – such as access to care, wait times for patients, shortages and burnout for professionals – is predicated on addressing regulatory and liability issues associated with teamwork
- the onset of new ways of treating diseases generated by technological advances requires the capacity to change training programs and regulatory provisions to enable appropriate responses to advances in medical knowledge

2.2 OVERARCHING STRATEGIC FOUNDATIONS

Defining and monitoring population health needs

Underpinning all of the strategies presented by Task Force Two is agreement that Canada needs to better understand, monitor and define population health needs. Participants at Task Force Two's January 2006 National Conference on Physician Human Resources agreed that planning for this country's health human resources (HHR) must be matched to the requirements for those resources, within a dynamic system that is driven by economic, demographic, social, professional (i.e., scopes of practice), organizational and technological forces.

The view that HHR planning must be based on population health needs has also been clearly stated in the May 2005 nursing strategy report[2] and in the September 2005 framework developed by the federal/provincial/territorial Advisory Committee on Health Delivery and Human Resources.[3] The body or mechanism described below would be well placed to support this work.

Body or Mechanism to support HHR planning

One of the most important strategies that emerged from the work of Task Force Two and that became a shared focus during several presentations on strategic direction at the National Conference on Physician Human Resources in January 2006 is **the creation of a body or mechanism to support and facilitate coordinating mechanisms in developing and establishing future pan-Canadian HHR plans** to ensure Canada has the right number of physicians, working in the right places and in an optimal way to meet the needs of Canadians.

As evidenced in the work leading up to Task Force One and subsequently Task Force Two, historic HHR planning decisions led to problematic physician human resources trends that were not detected soon enough. In turn, these trends affected system capacity in such an adverse way that attempts at reversing the effects of incorrect planning assumptions put the whole system at risk and set HHR planning back for years. To prevent the repeat of this unfortunate history, a pan-Canadian coordinated approach to HHR planning holds out new hope for more collaborative and flexible decision-making.

Thus there is an ongoing need to collect clean, reliable and valid data to monitor physician and other health human resources in the Canadian health system, to track outcomes and to report back to the Canadian public on the use of resources and quality of care. The need for quality HHR data has also been identified by the nursing sector study.[4] While accountability for the availability and use of HHR has been defined in different ways by different jurisdictions in Canada, this Task Force Two strategy recognizes the ongoing importance of monitoring and reporting on Canadian HHR planning targets and benchmarks – such as carried out by the Health Council of Canada – that are built on key elements of effective HHR policies, including responsiveness to population health needs and the most appropriate use of HHR. However, the importance of HHR capacity to the sustainability and functionality of the health system requires more focus on HHR planning. Although many national bodies must remain key stakeholders, the need to support a dedicated body

or mechanism and to coordinate HHR planning recommendations at a pan-Canadian level remains an overriding factor in this key strategic direction.

Thus, the purpose of a proposed body or mechanism is to help improve the way planning of physician and other healthcare provider human resources is undertaken within the context of HHR planning in Canada by: supporting the efforts of planners across the country, conducting much needed research and data analysis on an ongoing basis, and providing leadership and policy direction related to health human resource planning in Canada. This resource would be available to national, provincial, territorial, regional, regulatory, and health organizations that are involved in different ways in HHR planning. With this new body or mechanism in place, governments, educators, employers and professional associations will be better able to anticipate emerging issues and provide solutions when they are needed.

2.3 STRATEGIC DIRECTIONS AND CORE STRATEGIES

In addition to the overarching strategic foundations described in the previous section, the Task Force identified five strategic theme areas from the physician labour market analysis carried out in the second phase of its workplan that examined priority human resource issues facing physicians today and in the future. The following are the strategic theme areas deemed central to physician HR planning:

- education and training;
- interprofessionalism;
- recruitment and retention;
- licensure, regulatory issues and liability; and
- infrastructure and technology.

The following strategic directions and associated core strategies are the product of the contributions of working groups created by Task Force Two to review key considerations and formulate strategic options relevant to each theme, further distillation by the task force's Steering Committee into draft strategic directions for physician human resources, and further refinement by over 130 delegates from 60 government and health organizations participating at the National Conference on Physician Human Resources in January 2006.

2.3.1 EDUCATION AND TRAINING

A primary goal of physician HR planning is to achieve and maintain an optimal mix of family physicians and other specialists, as well as a stable and appropriately distributed workforce of all physicians that is responsive to the changing health care needs of the population. The role of the medical education and training system is central to achieving this goal, and remains an important focal point of key decisions affecting all aspects of physician workforce planning.

The face of medical education is changing. Indeed, the medical education system in Canada has evolved as physicians take on new roles, adapt to new learning methods and are called to under-serviced communities. Having noted this, however, there are increasing expectations regarding the social accountability of medical schools to respond more effectively to the country's health care needs. These include training a medical workforce that is able to work collaboratively with other professions, as discussed under the "interprofessionalism" strategic theme below, as well as able to serve all of Canada's communities – including inner-city, rural and remote, and Aboriginal communities. Unfortunately, governments do not always fully consider the changes such policy initiatives may entail for physician education.

The role of the medical education and training system is central to the goal of achieving and maintaining an optimal mix of family physicians and other specialists, and remains an important focal point of key decisions affecting all aspects of physician HR planning.

Medical education at all levels – undergraduate, postgraduate and continuing professional development – is expected to adapt to these changes, not only in terms of the number and mix of physician specialties, but also in the overall organization and delivery of educational services to support changing health care delivery models.

It is critical, therefore, that health reform initiatives generally, and physician HR planning specifically, be clearly articulated and coordinated with physician education and training at all levels.

The following strategies for change and to move forward are proposed:

Strategic Direction:

1. Education and Training of Physicians and other health care providers throughtout their professional life cycle must meet the needs of Canada's diverse populations.

In order to pursue this strategic direction, four core strategies have been identified:

1a To ensure that Canada can achieve and maintain a medical workforce in a responsible and ethical manner, plan and fund the requisite infrastructure and resources (human and non human) of the medical education, training and continuing learning systems, and make all components socially accountable.

The social accountability of medical schools was made explicit early in 2002 by way of the report "Social Accountability: A Vision for Canadian Medical Schools".[5] Multiple objectives are set out in the report, including: meeting societal needs; providing an appropriate number of physicians and mix of specialties; and training new physicians with the skills and attitudes for interdisciplinary team work, health promotion and disease prevention, community-based practice, care for urban/marginalized populations, public education/ health advocacy and lifelong learning. The report adds that social accountability of medical schools will be addressed by directing their education, research and service activities towards addressing the priority health concerns of the communities they serve. A variety of initiatives, some supported with federal government funding, have been implemented toward the realization of the objectives and vision enunciated in the report. However, much remains to be done

and certain components are outside the immediate purview and control of the educational enterprise. For example, faculties of medicine do not control the number of funded residency positions. Thus, social accountability transcends the boundaries of faculties of medicine.

Faculties of medicine are also increasingly offering learning opportunities outside of the traditional settings, which include academic health sciences centres and provincial networks of health care. Various initiatives to bring teaching into the community, including distributed medical education programs[iv], are seen as a further means of preparing this country's medical workforce to provide broad-based services in varied settings. Thus, the important contribution of community-based physician educators to medical education must be nurtured and recognized. It is also essential that all medical educators, both in the traditional and community education settings, be appropriately supported financially and academically. However, in light of limited resources available to support change, it is incumbent on governments to ensure that medical schools are appropriately accountable in terms of vision, student preparation, promotion of innovative practices, and responsiveness to defined societal needs, and are provided the requisite long-term funding to do so. Furthermore, the role of technology in facilitating changes in medical education must be recognized in planning the medical education and training system. For instance, technology is essential for the incorporation of distributed medical education models.

Physician learning does not occur only within traditional undergraduate and postgraduate medical education programs provided by faculties of medicine. The two national certifying colleges have established nationally validated frameworks designed to enhance the continuing professional development (CPD) of practicing physicians and surgeons. The frameworks promote lifelong learning at all stages of practice and demonstrate the commitment of the profession to be transparent and accountable to society for the provision of quality health care. While both programs are constantly evolving, more research is needed to determine a link between CPD and improved health outcomes. Other important initiatives are also under way. In 2004, all 17 Canadian medical schools began to collaborate on a two-year initiative, funded by Health Canada, titled "issues of quality and continuing professional development" (CDPiQ). Its multiple objectives seek, among other things, to support and facilitate the creation of a national interdisciplinary network of health professionals to foster, develop, and implement socially accountable continuing professional development. Laudable as this program may be, the advances made under its auspices may be lost unless sustained, long-term funding is assured.

In view of the changing roles of health care providers, changing models of health care delivery, changing incentives and payment mechanisms and the demand for more health professionals to meet health service needs, there is a need to better align the priorities and the outputs of medical schools to support health reform initiatives and to meet changing health needs of the population. Improved mechanisms are needed to better align the allocation of undergraduate and postgraduate positions with broader health human resource

iv The goal of distributive medical education programs is to enrich undergraduate and postgraduate medical education by increasing learning in distributed urban and rural community and hospital settings. [University of Ottawa. Retrieved (March 2006) at: http://www.medecine.uottawa.ca/tfg/pdf/D/University%20of%20Ottawa%20Vision%20for%20DME%20Mar28%2005.pdf]

planning objectives and societal need. It is also important to ensure that Canada balances its medical workforce needs without actively recruiting physicians from other countries, while recognizing the realities of international physician mobility. As such, Canada should achieve self-sufficiency by ensuring an adequate domestic production, together with the integration of ethical immigration policies to meet the evolving needs of society.

The changes advocated by Task Force Two will challenge many faculty members to rethink their roles and responsibilities; they will need to review their teaching strategies and consider new approaches to the education of the next generation of physicians. This calls for a major expansion of faculty development efforts across the country. All schools currently provide workshops and seminars to assist faculty to enhance their teaching skills but a more concerted and sustained effort will be needed to promote the paradigm shift in medical education recommended in this report.

1b Plan for flexible, responsive and interprofessional educational and continuous learning systems in which the curriculum and educational experience are linked to the needs of the populations served (including the under-served populations) and the needs of the providers.

Appropriately planned, funded and delivered education must offer both appropriate patient and community focus. By moving to decentralized medical education approaches and thereby to a variety of settings – including rural and ambulatory sites – the educational system is striving to prepare physicians for practice settings that address the particular needs of all communities, particularly those that have faced acute shortages: rural and remote communities, urban inner-city areas, Aboriginal communities, and others. Learners will also be exposed to varied practice settings, develop an appreciation of the essential role of generalists and other providers in the health care system, and gain exposure to the lifestyle of physicians in smaller communities. It must be understood, however, that expanding learners' exposure to varied settings will not remedy all woes. For example, general specialties, including family medicine, which have often been thought of as challenging in terms of professional and personal life balance, have also declined in prestige with notable repercussions on the current and possibly future physician supply if not addressed.[6] [7]

The critical role that generalists play in the care of patients with undefined and/or multi-system diseases (typical in an ageing population), in the care of emergency and acute care patients, and in the provision of much-needed services in rural and under-serviced areas, is well documented.[8] [9] [10] [11] [12] The 1996 *Report of the Task Force to Review Fundamental Issues in Specialty Education* defines "generalism" as follows: "The notion of generalism implies a broad base of general knowledge, skills, and attitudes common to all physicians and providing a substantial foundation or base upon which specialty and subspecialty medicine is built".[13] The Task Force's Steering Committee is of the firm belief that immediate steps must be taken to assure the future of generalism in Canadian medicine. Several factors have contributed towards erosion in generalist care in Canada – these factors span the spheres of education, economics, work conditions, and attitudinal/cultural factors. In fact, it has been commented that the factors impeding generalist care are "social and political at their core".[14] It has also been observed that the interest in generalist careers shown by medical students and residents will continue to wane, "unless we can substantially reshape market forces, the practice environment, and reimbursements, we will be fighting

an uphill battle for the hearts and minds of our students and residents".[15] Delegates at the Task Force's 2006 National Conference stated that flexibility and responsiveness in the provision of medical care would be better assured by fully implementing a competency based educational model. The development of the core competency postgraduate medical education (PGME) project, initiated by the Royal College in partnership with the College of Family Physicians of Canada, is intended to improve the structure of PGME in Canada. The objectives of the project include facilitating flexibility in PGME training, providing high quality residency education in alignment with societal need[16] and identifying sets of core competencies common to groups of specialties in order to develop an educational model that best reflects and builds on these commonalities.[17] In addition, conference delegates and the Task Force's Steering Committee also believe that such a competency-based approach to PGME must not only help assure the future of generalism but also factor in cultural competency in recognition of the multiple beliefs held by Canada's diverse population.

In addition to diversifying the setting where medical education is provided and continually striving to enhance undergraduate and postgraduate medical education approaches, the education and training system is also working toward implementing interprofessional education. As is explained in the "interprofessional" strategic theme, learning environments must not only promote, value, and model interprofessional collaboration, they must also retain the uniqueness that is characteristic of each profession's education and training. These complex transformations hold much promise but they require appropriate resources to ensure the capacity to adapt to ongoing change.

The final component of the educational continuum, continuing professional development (CPD), helps ensure that practicing physicians can maintain their skills, keep up to date on new procedures, technologies, drugs, and changes in how health care is organized (e.g., shift to interprofessional collaborative practice). Contemporary CPD approaches encompass learning about all roles specific to physicians' individual professional activities and practice profiles. It is less obvious, however, if CPD programs are being explicitly developed to address the needs of the populations served by physicians. This type of alignment would require much greater capacity to identify, and communicate to physicians, population needs, as well as a very sophisticated and well-resourced CPD system. Recognizing that the high prevalence of corporate/industry sponsorship of CPD (e.g., pharmaceutical), measures must also be implemented to ensure that CPD is not skewed toward industry interests.[18] Better consultative ties between medical schools and non-university CPD providers could help assuage this concern.

1c Plan for an adequate number of ministry funded postgraduate positions to accommodate all graduates of Canadian medical schools, Canadian re-entry applicants and qualified international medical graduates (IMGs).

Medical schools must generate the appropriate number and mix of providers to meet societal needs. To achieve this objective, medical school enrolments should be a component of an overarching health human resource management strategy aimed at nationwide self-sufficiency. Thus far, determining the number of undergraduate and postgraduate medical training positions has largely been provincial/territorial ministry-level decisions. Although

many jurisdictions have been developing promising modeling approaches, broader cross-jurisdictional collaboration would undoubtedly yield more positive results. Furthermore, since each faculty of medicine must confer with their respective provincial government to determine the number of positions, opportunities for cross-jurisdictional information sharing and collaboration are mostly lost.

Plans to create an appropriate number of postgraduate positions must be flexible to accommodate: any proposed increases to undergraduate enrolments; sufficient re-entry positions to allow physicians to change careers; the increasing number of appropriately qualified IMGs who reside in or migrate to Canada and to repatriate Canadian citizens who are graduates of international medical programs wishing to return to home. A sufficient number of positions must be available for Canadians studying in Canada's medical programs to continue their post-graduate medical training in this country and thereby hopefully reduce the risk of their permanently moving away, as is often the case when individuals pursue their studies internationally. Further, it is anticipated that increased re-entry capacity will have a positive effect on redressing the specialty mix in the medical workforce. For example, loss of re-entry positions has curbed the number of individuals who may opt for family medicine as they fear there may be "no way out" should they eventually choose to practice another specialty.[19] Also, conditions associated with re-entry, such as return of service agreements, must be carefully considered as they may be seen as a deterrent to the uptake of re-entry opportunities. Positive incentives are preferable to more restrictive measures. An appropriate number of residency positions would also increase flexibility by facilitating transfer from one residency program to another based on changing interests, family demands or community needs. Lastly, positions are needed to accommodate appropriately qualified IMGs who migrate to Canada. Such positions will allow them to acquire additional training and assessment that may be needed to meet the Canadian standard.

To date medical schools have been given modest resources, inconsistent policy direction and insufficient planning information to respond appropriately to the multiple challenges they are called upon to address. In order to respond appropriately to changing needs of people and the health system, medical schools and their associated decentralized education/training sites must be appropriately resourced and supported if physician human resource goals are to be achieved.

1d Plan an education and training system to create a physician workforce that reflects the population's diversity and needs.

Aboriginal populations are seriously under-represented in medical schools. Given that the Aboriginal community will likely remain a health care priority, additional funds will be required to increase the number of Aboriginal graduates and to support needs-specific training programs with formal, culturally sensitive curricular objectives in Aboriginal health issues, and which provide a culturally safe environment that does not oppose their cultural identity. Measures to support the goal of increasing the number of Aboriginals in medical schools could include recruiting Aboriginal faculty, developing advisory committees which include members of the local Aboriginal community, and creating an Aboriginal support office tasked with providing ongoing support both financially and academically

to Aboriginal students (Association of Faculties of Medicine of Canada Aboriginal Health Task Group, 2005). Direct support to Aboriginal, other ethnic/cultural groups and lower income families is also needed to establish a workforce that reflects the population's diversity. Such support, for example, could be used to provide direct tuition support since high tuition fees and debt load are known to discourage a broader spectrum of society from considering medical careers. Another option to be explored is that of a more creative and flexible loan repayment program.

The necessary support for Aboriginal, other ethnic/cultural groups and individuals from lower income families to enter health occupation training programs at college and university levels must be a priority. To achieve this priority, governments must also assume the concomitant responsibility of providing sufficient and sustained resources to the medical educational system to enable it to meet societal health care needs, including training and educating the medical workforce that is central to this endeavour. Seeking input from patients and the community would also facilitate achieving this priority.

In order to meet the needs of Canada's diverse population, health care providers must have the right skill sets to assure the cultural safety of patients.[20] By having a cadre of trainers/mentors with the requisite cultural competency[21], the medical workforce would be better able to meet these diverse needs. It is also expected that the increased presence of culturally competent trainers and mentors would aid in the recruitment of Aboriginal and other minorities in the Canadian medical workforce. Without losing sight of the plight of Aboriginal populations and other cultural minorities, it is equally important for the education and training system to address the health status of all segments of society (e.g., rural/urban/inner city/northern communities, special needs of the frail and elderly, etc.). While a number of approaches are described in this report, better information about population health needs will greatly enhance the educational system's ability to plan and align its programs to the health care needs of Canada's diverse populations.

It seems to be increasingly accepted that integrated and collaborative care will help to address the changing health needs of a growing and aging population.

2.3.2 INTERPROFESSIONALISM

Canada's health care system is constantly being renewed. Central to this activity have been an increased focus in recent years on primary health care (PHC) reform and the development of interprofessional teams. These developments are, in many respects, intrinsically linked as a PHC system involves multiple health professions working together within the broader determinants of health to provide a comprehensive array of services to meet the needs of Canadians.

Interprofessional collaborative practice among and between health professionals is not new and has long existed within as well as outside the PHC system. What is new is the systemic funding of interprofessional teams that is considered by governments and other health authorities to provide more comprehensive care with access to a wider array of health resources for Canadians.

It seems to be increasingly accepted that integrated and collaborative care, provided by members of various health professions with a range of knowledge and skills, will help to address the changing health needs of a growing and aging population. Furthermore,

it is clear that contemporary best practices in chronic disease management encompass comprehensive services (covering health education, through treatment to rehabilitation and support) delivered by interprofessional teams. The increasing sophistication of health care consumers is leading toward a consumer-provider interdependence model for health care delivery, and a team of multiple professions is assumed to be more responsive to the demand for information.

While there appears to be growing patient and provider acceptance and satisfaction with team-based, collaborative practice, the extent of that acceptance has yet to be comprehensively determined, particularly given evidence that physicians in some locations remain less convinced of the overall benefits of interprofessional collaborative practice and, as such, may be more reticent to enter into such practice arrangements. Moreover, while there is great hope and growing evidence that interprofessional collaborative practice will lead to increased patient access and provider productivity[22], it is much less certain, however, that interprofessional collaborative teams will reduce costs.

Physician shortages have contributed to discussions in Canada on inter-professionalism in health care.

The widely discussed physician shortages have contributed to the discussion on interprofessionalism in health care. Some believe, for example, that existing family practices functioning in a PHC team will see more patients. However, clear evidence that this is indeed the case is lacking. Interprofessionalism is also seen as an important means to help physicians achieve a better professional and personal life balance. Once again, sound evidence to support this assertion is needed.

Successful implementation of interprofessional collaboration in practice will require comprehensive information about the benefits and shortcomings of interprofessional collaborative practice, and interprofessional education among and between health professionals. As interprofessional teams increasingly become a reality, there is also an increasing need to address challenges of interprofessional education and patient-centered collaborative practice in both education and health delivery.

The following strategies for change and to move forward are proposed:

Strategic Direction:

2. INTERPROFESSIONAL COLLABORATIVE PRACTICE WHERE PHYSICIANS AND OTHER HEALTH CARE PROVIDERS HAVE CLEARLY IDENTIFIED AND VALUED ROLES.

In order to pursue this strategic direction, three core strategies have been identified:

Core Strategies:

2a Create a culture for interprofessional collaboration.

It is very clear that physicians and other health care providers do not provide health care services independently, and that each professional group makes unique and important contributions to care. Working effectively in teams requires that students be implanted in learning environments that show the interdependence between education and practice, and which promote and model interprofessional collaboration, while retaining the uniqueness

that is characteristic of each profession's education and training. Thus, the need to clarify interprofessional roles, tasks and relationships is essential for both the education and practice environments. Central to successful collaboration among physicians and between physicians and other health professionals is the implementation of actions that instill mutual respect, collegiality and trust. The CFPC and RCPSC, in collaboration with other partners, are actively defining such measures for physicians, many of which may also apply to other health professionals.[23]

The education system must also address the administrative / management roles that are integral parts of interprofessional collaborative teams. This not only entails curriculum content and training approaches, but also ensuring that the right persons are being trained for these roles, and developing within and outside of academe a cadre of management experts across health disciplines.

Although much remains to be done within the education and training system, some progress is being made to teach, promote and value interprofessionalism. It is all the more challenging, however, to conceive of ways to effect culture changes within the practice environment, which is less susceptible to centralized influences and controls than the undergraduate and postgraduate medical education systems. Provincial/territorial government officials can uniquely operate as neutral parties that set both the vision and accountability structures necessary for success in the development of interprofessional teams.

It is clear that legislation governing health professions can be adjusted to accommodate overlapping scopes of practice, which in turn can support collaborative practice. As the system moves toward interprofessional practice in various health care settings, regulatory colleges for the professions need to continually review their policies to include the interprofessional approach. Also key to the successful implementation of interprofessional collaborative teams is the development of an appropriate liability framework for team-based collaborative practice. This latter point is discussed in more detail under the licensure, regulatory issues and liability strategic theme.

Changing and creating a culture of interprofessional collaboration requires more than educational tactics, accountability and liability frameworks, and legislative adjustments. Carefully planned change management is also needed, all of which needs to be championed and systematically implemented.

2b Establish sustainable funding/remuneration models that support collaborative practice.

Collaborative practice must be appropriately funded and supported by complementary policy approaches and decisions to be successful. Experience has already shown that many promising interprofessional collaborative practice models, funded as pilot projects, have been unable to continue, given lack of sustained funding.[24]

As is explained under the strategic theme "infrastructure and technology", appropriately planned and funded infrastructure and technology impact the productivity and effectiveness of health professionals and the health care system. Thus, requisite investments must be made to provide practice support tools – such as the electronic health record or other technological

and physical resources – that support interprofessional collaborative practice. Further, all members of interprofessional collaborative teams should be appropriately and adequately remunerated for the type and range of their professional activity. As such, the various options to fund provider remuneration need to be fully explored. Innovative remuneration models also need to be better understood and implemented to make collaborative practice models more attractive to all health care professionals.

Currently, there are four main ways of compensating physicians for their services: capitation, salary, fee for service (FFS), and a blended approach of any number of payment methods that may also include sessional fees (e.g., hourly stipends, per diems) and service contracts. Historically, FFS has been the most prevalent form of remuneration. However, there has been a shift away from the FFS model in Canada.[25] Some suggest that FFS provides a disincentive for physicians to perform duties that are not remunerated, thus failing to recognize the full range of activities. As such, FFS may be less supportive of interprofessional teamwork. Capitation is generally understood to be a method of physician compensation for physicians where the amount of revenue a practice receives is based on an amount paid per patient (capitation fee) times the number and nature of patients within the practice (practice population) regardless of the number of visits.[26] In theory, this method of payment is associated with the incentive to focus on prevention and to refer patients to other care providers. Blended compensation models are generally understood to be a mix of two or more payment methods, such as capitation supplemented with fee-for-service, salary or sessional components[27] applicable to all professional activities (e.g., research, education) and not exclusively clinical work. Models of remuneration that support and promote the principles of interprofessional practice must continue to be developed and validated, and their impact on productivity and quality of care thoroughly assessed.

Since interprofessional collaborative teams comprise other health providers in addition to physicians, it is also necessary to address remuneration for all partners in any team. Irrespective of team structures and approaches, team members' preferred remuneration modes must be carefully considered to optimize their satisfaction and, hence, their retention within the team. Whether physicians, nurses or other team members, they must be remunerated in a way that respects their roles and incentivizes change when needed.

It remains, however, that an important funding-related issue that might impede collaborative practice, particularly in the community setting is, in all likelihood, the fact that only a small percentage of services of many other health professionals is publicly funded. While 98% of physician services are publicly funded, the Canadian Institute for Health Information estimates that only 9% of the services of certain other health professionals were publicly funded in 2003.[28] Getting beyond this barrier will require innovative arrangements between governments, third-party insurers, providers and patients.

Finally, special consideration is needed for indigenous health care since its funding differs. Primary health care for aboriginal populations is under the federal government's purview whereas secondary, tertiary and quaternary care is usually provided in health care settings funded by provinces and territories.

There are many areas in the country where different funding and remuneration models are being used to achieve and sustain collaborative practice. The benefits of greater information sharing in this regard are unquestionable as is the need for ongoing and thoughtful evaluation.

2c Evaluate on an ongoing basis the impact of interprofessional collaborative practice on patient/client, system and provider outcomes, and apply the findings to the planning process.

It is essential to plan health services based on the particular needs and characteristics of the population. As well, the balance between population health goals and the relationship of individual health care providers with individual patients must be accounted for. To these ends, feasible needs assessment approaches should be established. These approaches should go beyond the review of health status indicators to, in the case of Aboriginal communities, the development of cultural competency.

There is a general belief that Canadians and those who are involved in our nation's health system support interprofessional collaborative care. The extent of that acceptance among patients and providers has yet to be systematically and comprehensively assessed. Notwithstanding the information gap in this regard, there is a growing evidence of varying levels of satisfaction among both patients and providers[29] with various interprofessional collaborative health care delivery models that show this approach is indeed warranted.[30] Ongoing and more systematic assessment of patient and provider satisfaction is needed to ensure the ongoing soundness of existing and new interprofessional collaborative models.

One of the key factors in determining whether the trend toward interprofessionalism will maintain momentum is evidence of effectiveness in improving health care system outcomes. While there does appear to be evidence that collaborative practice can reduce the rates and duration of hospitalization, increase access to care, improve client and provider satisfaction, and improve clinical outcomes, there is a paucity of evidence that interprofessional education will generate effective collaborative practice and ultimately better patient outcomes.[31] Thus, the need remains for research to demonstrate the effectiveness of interprofessional education in terms of improved patient, provider and system outcomes. Equally important is investing in research to determine the impact of working in teams, particularly in different practice settings. Also, research must not be static. Ongoing monitoring is needed to verify the validity of assumptions about interprofessional education and collaboration, including cost and outcomes.

Continuous quality improvement must be aligned with an objective examination of evidence. Investment in research and monitoring activities will be worthwhile if used to determine whether the findings support the evidence of high quality care provided by interprofessional teams.

We live in a world of global competition for physician talent (…) Competition among jurisdictions in Canada to recruit and retain physicians continues to exacerbate shortages in many regions.

2.3.3 RECRUITMENT AND RETENTION

We live in a world of global competition for physician talent. To date there has been a lack of pan-Canadian coordination of recruitment and retention efforts for physicians. It remains a significant challenge for the medical profession, government and other stakeholders to invest in recruitment and retention strategies that accommodate a broad range of factors, including professional factors (scope of practice, workload, professional support and professional development opportunities), personal factors (spousal employment, work-life balance, and career evolution) and financial factors

(level and stability of income). The emphasis in recruitment and retention to date has been on compensation and "negotiation". Greater attention must also be paid to professional and personal factors.

The broad goal of physician human resource planning is to achieve and maintain an optimal number and mix of physicians in order to appropriately respond to the changing health needs of the population. This goal cannot be achieved without an appropriate and sustainable supply and distribution of physicians. Initiatives geared towards recruitment and retention need to occur within the context of the specifics of regional disparities, rather than being based on generalized statements of shortages. It is evident that mal-distribution of physician human resources, both geographic and professional, has persisted in Canada for decades. Competition among jurisdictions in Canada to recruit and retain physicians continues to exacerbate shortages in many regions.

Most government policy related to recruitment and retention has focused on financial incentives to adjust geographic distribution, especially for rural and remote locations. These tend to result in success for initial recruitment, but not retention over time. In terms of strengthening Canada's long-term capacity to produce adequate numbers of physicians to address attrition due to various causes – including emigration and retirement – and to meet growing and changing health care demands, there is wide agreement that there are inadequate numbers of undergraduate and postgraduate positions. This is also felt to be the case for positions for IMGs, Aboriginals and other cultural and linguistic minority groups, family physicians, generalist specialists and some sub-specialty disciplines for those who wish to retrain to meet their community's changing health care needs. Furthermore, the medical educational system has had a lack of Aboriginal focus, a lack of exposure and preparation to meet the complex needs of rural communities, and a lack of emphasis on understanding collaborative competency requirements. It is also felt that special measures have failed to raise career awareness among under-represented groups of medicine. As a result, there has been little recruitment from these constituencies.

3. A PAN-CANADIAN APPROACH IS REQUIRED FOR ONGOING HUMAN RESOURCES PLANNING FOR PHYSICIANS AND OTHER HEALTH CARE PROVIDERS. THIS APPROACH MUST INCLUDE NEEDS-BASED FACTORS AND MUST INCORPORATE A COHERENT AND COMPREHENSIVE RECRUITMENT AND RETENTION STRATEGY.

The following strategies for change and to move forward are proposed:

Strategic Direction:

In order to pursue this strategic direction, three core strategies have been identified:

Core Strategies:

3a	**Designate a body or mechanism, with an appropriate analytical capacity, infrastructure support, and governance model to coordinate a pan-Canadian needs-based approach to HHR planning and development across jurisdictions in order to provide an integrated approach across all parts of Canada.**

To address the issues faced today and to plan for a sustainable medical workforce tomorrow, a pan-Canadian needs-based health human resources (HHR) coordinating body or mechanism will be central to improving physician human resource planning in this country.

It is crucial that Canada develop a realistic projection and planning capacity to forecast and adapt to health human resources needs, rather than the current reactionary system that is constantly reacting to 'booms' and 'busts' in demand and supply in an ad-hoc manner. Currently, needs-assessment is predominantly defined through analysis of historical service utilization patterns. However, this approach disregards the distinction between needs and demands, and the inextricable impact of societal values on needs. Thus, extensive research is required to develop a better framework to understand population health needs.

Needs-based HHR planning will also have to be premised on the understanding that population health needs, provider needs, community needs, individual patient needs and system needs are all distinct from each other. In fact, these needs are not only distinct, but may often be in tension with each other. A primary function of this new body or mechanism will be the analytical ability to track the dynamic interaction between these various levels of needs and adapting it to HHR planning.

By coordinating the efforts and knowledge of planners and researchers across the country, identifying and/or conducting much needed research on an ongoing basis, this body or mechanism will be a resource to the country, and provide leadership and policy direction related to health human resource planning in Canada, all the while without infringing on provincial and territorial jurisdictional autonomy. It is clearly envisaged that this new body or mechanism would adopt an advisory role, rather than being prescriptive in any way.

This new body or mechanism will enable governments, educators, employers and professional associations to better anticipate emerging issues, provide solutions where they are needed, and enable effective longer-term planning. It will allow for more comprehensive consideration of the full dimensions of needs-based approach to HHR planning and development, which must factor: health needs, provider needs, community needs and system needs. Furthermore, it will provide the platform to address a broad set of issues affecting physician recruitment and retention, including the following:

- professional and life cycle needs;
- articulation and clarification of values and personal choices;
- funding arrangements; the possibility of a pan-Canadian compensation strategy;
- health delivery models and scopes of practice/changing practice patterns (e.g. the nature of the practice of family physicians is evolving);
- undergraduate and postgraduate education and continuing professional development;
- technology and infrastructure; inter-provincial mobility; academic needs for research;
- demands of teaching and community preceptors; disciplines with declining numbers such as family medicine and certain other specialties;

- needs of under-served populations, inner-city needs, rural, remote and northern communities;
- IMG assessment and credentialing; international HHR pressures;
- repatriation of Canadian trainees and health professionals abroad;
- Aboriginal HHR planning; the special needs of minority and cultural groups.

This body or mechanism will also facilitate the establishment of a framework for physician HHR planning, which factors other health professionals who are all important partners in health care and impact the physician workforce.

Given the far reaching impact of its work, delegates at the January 2006 National Conference felt that this proposed body or mechanism should have interprofessional presence and involve, in some form or another, all stakeholders, including: governments, academia, residents and medical students, regulatory bodies, health authorities, researchers, private sector, Aboriginals, medical and other health professional organizations/associations, patients/the public, and even mass media. Even though the approach has a pan-Canadian emphasis, it will need to be implemented at the jurisdictional and community level. It was felt by Conference delegates that this body or mechanism should inculcate a grass-roots philosophy that is sensitive to local realities, rather than adopting a 'central planning' approach.

It is crucial that this body or mechanism work collaboratively and compatibly with other regional health human resources planning initiatives. For instance, consistent with their commitment stemming from the First Ministers' Accord, a number of provinces have now published formal health human resources action plans. For this strategy to be successful, it is imperative that it work in concert with such initiatives.

A major decision will be whether this body or mechanism will be an entirely new structure, or whether it builds upon existing organizations. For instance, it may be built upon existing structures such as ACHDHR, the Health Council of Canada, the Canadian Medical Forum, the Conference of Deputy Ministers, rather than 'reinventing the wheel'. It could also take the form of a virtual entity that enables effective interface between and provides additional support to existing bodies. Additionally, viable and sustainable funding and resources will need to be identified.

Recognizing the pivotal contribution and role of the proposed body or mechanism, and the many ongoing and urgent challenges in regards to physician and HHR planning in general, there was agreement at the National Conference that immediate attention must be given to this recommended strategic direction.

3b Address and develop special recruitment and retention measures to address the needs of groups where health inequities are evident such as for Aboriginal peoples, people living in rural, remote, northern and isolated communities, and where shortages of providers are predicted.

A pan-Canadian approach will foster a participatory approach to recruitment and retention to ensure that all voices are heard. It can also lead to win-win outcomes for individuals in need

of care, physicians and other healthcare providers, health organizations, local community and larger jurisdictions. The proposed pan-Canadian approach could incorporate ongoing market research to sub-segment physician recruitment and retention tactics based on evidence of physician and community need in order to improve access and effectiveness of the overall healthcare system. This framework may help to address the lack of Aboriginal focus, the lack of rural focus and may raise the awareness among and the recruitment of underrepresented groups into medicine. A pan-Canadian approach would foster the sharing of effective strategies to recruit and retain physicians. Historically, a top-down approach has been adopted in implementing strategies aimed at groups facing inequities; it will be critical that these measures are inclusive and participatory and reflect the needs of these groups, as voiced by them.

Inequities are not solely geography-specific. The health care needs of urban populations are not homogenous and different segments face varying access to care issues. These disparities may stem from socio-economic, cultural, or ethnic realities. Certain groups may experience health inequities within certain urban enclaves. Inequity may also occur on the basis of type of disease. Thus, while the recruitment and retention concerns in rural areas are very discernable, they are also very pertinent in urban settings.

In developing measures to address health inequities, it must be recognized that groups experiencing such inequities are forever changing and therefore need to be further identified (e.g., inner city, chronic disease), and this exercise must be carried out on an on-going basis. It must also be recognized that challenges within these communities/groups are not all health specific, but which nonetheless impact their health, such as education, housing and employment. Thus, collaboration on common social issues to advance a social agenda should be considered. It is also important to ensure that the communities who are to implement the identified measures have the resources to put such plans into action.

It is important to target measures aimed at addressing shortages in specific physician populations to the specific circumstances of that particular group. For instance, the human resources difficulties occurring in one category of specialists (e.g. anesthesiologists or academic clinicians) may relate to significantly different factors than the circumstances faced by another specialty group (e.g. pathologist or clinical investigators). Furthermore, shortages in certain specialties may be impacted by a variety of factors including educational models, funding, and flexibility in training. Studies suggest that recruitment to disciplines and practice locations can be enhanced through early mentorship and location-specific training.[32 33 34 35] Additionally, elements that hamper the flexibility of the medical education system, such as re-entry to training, need to be addressed. Finally, the impact of student debt-load on career choice and practice location will have to be taken into consideration, with input and involvement of medical students and residents.

Similarly, the regional mal-distribution of physicians and other health professionals needs to be addressed; measures will have to be aimed at leveling the playing field between provinces and territories to limit the 'poaching' of resources from one region of the country to another.

3c Focus on professional, personal, and intangible variables in addition to financial factors that impact on practice choices and practice locations, and support models of service delivery that recognize the full range of professional activities and attract and retain providers.

A pan-Canadian approach would provide a mechanism that facilitates discussion and harmonized problem resolution, including identifying the necessary sustainable funding, to address the wide range of issues that ultimately are central to the recruitment and retention of physicians. These factors are multi-dimensional and include: proactive and innovative planning cycles; ethical recruitment practices; the creation of capacity to respond efficiently and nimbly to unforeseen and unpredictable events and circumstances such as pandemics and disasters; addressing labour shortages; promoting work-life balance; allocation of resources to enable physicians to practice the full extent of their discipline (e.g., sufficient operating room time); promoting equitable outcomes among diverse groups of needs (e.g., more targeted supportive strategies to increase number of Aboriginal physicians, and physicians working in inner-city, rural, remote, northern and isolated areas); flexible funding arrangements for testing initiatives and innovative models which address major inequities and imbalances; sharing and learning from best practices; addressing medico-legal/liability issues; upgrading information technology and infrastructure; increasing the portability of licensure; and incentive systems and accountability mechanisms to better align resources with broad system goals and to better support workforce transition.

The ability to recruit and retain physicians will be enhanced by addressing intangible variables, in addition to financial factors. This entails, for example, recognizing the full spectrum of physicians' activities within an academic setting (e.g., teaching, research, leadership and administrative functions). In more general terms, it has also been observed that spousal employment opportunities, educational opportunities for all members of the family, cultural, recreation and religious activities, community orientation, special funding for *locum* support, assistance with practice establishment costs, and paid vacation time, to name a few, have a positive impact on recruitment and retention.[36 37 38 39]

International human resource pressures also influence recruitment and retention. For instance, an under-supply of physicians in the U.S invariably increases the likelihood of Canadian physicians migrating south. It is anticipated that there will be a significant increase in the shortfall of the physician workforce in the United States during the next 20 years. It is important that HHR planners in Canada recognize that there may be aggressive recruitment of Canadian medical graduates to address their shortfall. In fact, a number Canadians have already been recruited over the years to fill shortages in the United States. Canadian planners and other officials should be equally aggressive in trying to repatriate physicians who have left Canada to work in the United States. Thus, the push and pull factors that influence such international migration need to be addressed.

Developing a comprehensive approach to physician recruitment and retention is one of the critical pillars needed to ensure access to quality health care in Canada. Physicians in Canada recognize the leadership role they play in the development of strategies and tactics

to address shortages. However, physicians cannot do it alone. The strategies outlined here are the first steps in a process of dialogue with all stakeholders that ultimately must lead to a collaborative agenda for action for all health care partners, across jurisdictions and among communities.

2.3.4 LICENSURE, REGULATORY ISSUES AND LIABILITY

The systems used to regulate health care providers are largely reflections of the needs for care and the modes of service provision at the particular point in time that they were developed. Moreover, Canada's regulatory systems are generally not designed in ways that can easily accommodate changes in the modes of provision and population health needs. For example, the introduction of telemedicine in Canada, where medical licensure falls to the provinces and territories, has posed certain challenges from a regulatory perspective: should liability and accountability lie in the province/territory where the physician is located or where the patient is located? As a result the health care systems of Canadian jurisdictions have limited capacity to 'adjust' to change. This results in the prevailing needs of the population potentially being met either inadequately or inappropriately as the use of available resources is constrained by regulatory mechanisms –which are at times beyond the purview of the provincial and territorial regulatory authorities – that have failed to move with the times. The efficiency of the system is also compromised by regulatory mechanisms about what health care providers 'do' as opposed to what patients need. Moreover, what providers 'do' can and does differ between different parts of the country

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Given that a common thread of health professional regulation across Canadian jurisdictions is the notion of regulation in the service of the public interest, it seems plausible to assume that the public interest lies in ensuring that health care providers are deployed in ways that best meet the needs of patients. It is therefore difficult to see how different regulations in different provinces can be reconciled with this public interest imperative – at least from a scientific perspective. If a provider can diagnose a particular condition, or perform a particular procedure, safely and effectively on a patient with a particular condition in one province, why not in another? Such differences in regulations can be explained in part by differences in the prevailing values in the different provinces.

The current regulatory environment also makes it difficult for IMGs to understand and navigate the system.

The following strategies for change and to move forward are proposed:

Strategic Direction:

4. Complementary regulatory decisions that support both patient-centered practice and provider mobility.

In order to pursue this strategic direction, three core strategies have been identified:

Core Strategies:

4a Develop a harmonized pan-Canadian process that ensures that licensure of physicians in every province/territory follows standardized practices.

A precursor to developing a harmonized regulatory system is the documentation of how licensure standards vary from one part of the country to another. Such an inventory does not currently exist in a systematized/formalized manner, and would be one of the immediate next steps towards realizing this core strategy.

While there is a lack of systematized documentation of licensure requirements, clearly there already exists extensive commonality in terms of expected standards. For instance, the gold standard for full licensure of Canadian graduates of Canadian medical schools across all jurisdictions usually comprises the following: a medical degree from a Canadian university, successful completion of the two qualifying exams of the Medical Council of Canada (leading to the credential of 'Licentiate of the Medical Council of Canada' (LMCC), and certification from the Royal College of Physicians and Surgeons of Canada (RCPSC) or the College of Family Physicians of Canada (CFPC). In addition, several jurisdictions have or are considering umbrella legislation for the regulated health professions. These health profession acts already provide a common framework for regulation across the various professions. They can also require the various regulatory authorities to follow common rules for various activities, such as complaints investigations, and standard-setting for education and practice.

A pan-Canadian harmonized licensure process would involve jurisdictions working together to agree on a transparent and standard approach to all aspects of provider regulation and licensure based on common competencies. It would encompass new graduates of training programs, the revalidation of existing providers as well as regulation of those providers trained in other jurisdictions looking to provide care in a Canadian jurisdiction (e.g., IMGs). The Western Alliance for the Assessment of International Physicians (WAAIP) is an example of inter-provincial collaboration on one aspect of physician regulation. Such harmonization of regulatory processes among jurisdictions would enhance the capacity of the health care systems to achieve the optimal deployment of the health care workforce. Substantial progress has been made thanks to the national standard for portable eligibility for licensure introduced in 1992. However, there remain ongoing challenges for physicians who do not hold a Canadian certificate of qualification, particularly IMGs.

Since the Canadian medical workforce also comprises IMGs, standardization of practices surrounding their licensure is required. This includes: standardized assessment of IMG knowledge, skills and attitudes; and the establishment of a common database of verified

credentials. Adequate resources will be required to allow for additional training in instances when IMGs are deemed to not meet the requisite national standard.

It will be necessary to ensure that increased harmonization, and hence the associated portability of licensure, does not impact negatively on the provinces/territories that have difficulty in retaining physicians. The key is to balance the freedom of providers to change practice locations, while simultaneously not exacerbating the regional HHR disparities that already exist. Forcibly restricting mobility as a means to ensure equitable distribution is not only troubling to many, but also inefficient; such restriction often leads to providers migrating from rural to urban areas, intra-provincially. Furthermore, inter-provincial migration is impacted upon by a number of factors besides licensure, a main one being compensation models. It is recognized that some of the recruitment and retention factors described under recruitment and retention strategic theme are integral components to ensuring optimal distribution of the medical workforce across all parts of the country.

Of utmost importance in developing a harmonized pan-Canadian process that ensures that licensure of physicians in every province/territory follows standardized practices is the primacy of quality of care. Maintaining consistent quality standards across the country in no way impedes on any jurisdiction's ability to issue, in crisis situations, restricted licenses under criteria that may fall below the generally accepted national standard. However, concern has been expressed that such lowering of acceptable standards to accommodate restricted licensure has become more common, and gone beyond the original intent of it being a mechanism used only in exceptional crisis circumstances.

Finally, any harmonization process leading to standardized practices for licensure of the medical workforce will not be achievable without an appropriate pan-Canadian HHR plan that determines provincial/territorial HHR needs and prevents cross- jurisdictional poaching, provides a remedial mechanism to physicians who cannot meet the defined national standard, and which clearly identifies scopes of practice of all health care providers.

4b Develop a regulatory framework for interprofessional collaborative practice that incorporates risk management, quality assurance and quality improvement as continual processes.

Health provider regulatory frameworks are generally designed around an individual provider as opposed to individual providers in the context of a collaborative team providing health care services. The focus of regulation needs to be broadened to include the regulation of collaborative care provision. This includes establishing clear role definition for interprofessional service provision and extending existing approaches to quality assurance/improvement to produce corresponding processes for the continuous quality improvement for providers in collaborative practice settings. Interprofessional collaborative practice will require that the various health professional regulatory authorities agree on one or more approaches for individual and shared accountability, and develop mechanisms to deal with complaints and discipline that take into account the role of the team in the provision of care.

Key factors for the successful development of a regulatory framework for interprofessional collaborative practice include: harmonization of regulatory processes for team members, systematic quality improvement measures such as evaluation/accreditation of team-based care; clarity of definitions; legislative requirement for adequate liability coverage for all

members of the health care team; more data on regulatory issues; building on successful interventions in other health professions; clarifying the accountability of the physician in the collaborative care environment; clarity on referral processes and communication/ responsibilities of team.

It is important to recognize the role of quality assurance activities (e.g., continuing professional development, risk management) in ensuring effectiveness and good patient care. These activities, ideally, would take place at the level of the individual team member and at the level of the team as a whole. Securing protected time and appropriate remuneration for such activities will increase acceptance and participation in quality assurance initiatives by all the members of the collaborative care team.

4c Develop a system that ensures availability of adequate liability protection and a clear accountability framework for every provider in a collaborative care setting.

Regulatory approaches, including establishing standards of practice for interprofessional service provision, need to be developed to accommodate issues of accountability and liability within collaborative care settings in order to provide both providers and patients with a system of rights and responsibilities that accurately reflects the role of providers. In the absence of such provisions, uptake of collaborative approaches to service provision may be resisted by providers faced with being held responsible for an unfair share of service provision.

Key success factors underlying a liability framework for team-based collaborative care include: addressing liability for delegated acts, having individual liability be acceptable within the team, providing sufficient liability insurance for all team members, and defining scopes of practice and referral processes. Regulatory and other authorities should encourage every member of a collaborative team to acquire adequate liability protection.

Further, regulation will be best addressed in a profession-led approach for each provider group. However, there is much to be gained by developing a framework to inform and guide regulation in a context where standards must be applied across multiple professions with overlapping scopes of practice. Shared responsibilities translate into shared accountability and, presumably, shared liability, which remains problematic in Canada. It will be up to the various regulatory authorities to agree on a mechanism to develop and apply standards for their members in a collaborative care setting.

Lastly, a system that includes appropriate quality assurance and continuous quality improvement activities will go a long way to creating an environment of accountability that is based on self-reflection and lifelong training. This educational approach is strongly supported by the medical regulatory authorities.

2.3.5 INFRASTRUCTURE AND TECHNOLOGY

Health care systems are characterized by continual developments in the content of health care services and the ways of (including the technologies of) delivering those services. However, the planning for and deployment of health human resources may not always occur in the context of these continuing developments. Health care providers and health care technologies are different types of health care resources, but the latter can affect the productivity of the former. Making best use of health care providers therefore depends upon the availability of the requisite physical infrastructure and the appropriate use of health technologies.

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The planning mechanisms generally used have not encompassed the role of the provider in the context of developments in technologies. Instead planning has generally been 'silo' driven, focusing on the planning of physicians or nurses in isolation of the contextual influence of other health care 'inputs'. Little attention may be given to the investment required to facilitate the integration (or "up-take") of new technologies. As a result the health care systems have often been inflexible and unresponsive to developments in technologies – not necessarily because of any resistance to technology per se, but because the other resources (e.g., training) have not been in place to take advantage of the opportunities presented by the new technologies.

While technology clearly offers potential benefits in terms of the delivery of quality health care, it must be also acknowledged that technology in and of itself is not inherently beneficial. The gains from technology are dependent on the appropriate application of it, within the context of a system's other human and physical infrastructure. Thus, rather than adopting a technologically deterministic perspective, which assumes that all new technology is inherently beneficial, evaluative studies are required demonstrating what other human, cultural, institutional, and physical factors need to be in place for the effects of technology to be fruitful, in terms of health care delivery and access.

The following strategies for change and to move forward are proposed:

Strategic Direction:

5. ENSURE THAT CRITICAL COMPONENTS THAT SUPPORT EFFECTIVE AND EFFICIENT SYSTEM DELIVERY AND INTEROPERABILITY ARE EXPANDED TO ASSIST PHYSICIANS AND OTHER PROVIDERS TO DELIVER QUALITY HEALTH CARE AT ALL PRACTICE SITES AND POINTS OF CARE IN A TIMELY MANNER.

In order to pursue this strategic direction, three core strategies have been identified:

Core Strategies:

5a	**Develop a 'wired medical world' encompassing a wide range of interoperable communication and information technologies to support optimal information management, knowledge transfer, service delivery, and secure sustainable funding for the appropriate use of these technologies.**

New interoperable communication and information technologies (e.g., electronic health and electronic medical records, telehealth, telemedicine, teletriage, and wireless handheld technology) provide the opportunity for enhancing productivity in health care, reducing the cost of service provision and hence freeing up resources to provide care for other patients. The impact of technology goes beyond greater productivity; in some cases, the incorporation of new technology may in fact fundamentally and qualitatively change the role of the provider. For instance, the adoption of new technology has had an indelible impact on the nature of the work performed by cardiologists.

The use of communications technology can, where appropriate, help in alleviating HHR shortages. For instance, in Canada, telemedicine/telehealth initiatives are already underway to address access issues. Beyond this, some other countries have begun 'outsourcing' certain services such as diagnostic imaging to foreign locations. However, the full potential of telemedicine/telehealth initiatives, and the potential for outsourcing to foreign jurisdictions, will be curtailed unless the current licensure and liability obstacles are overcome.

The Task Force has identified inter-professional collaboration within health care teams as a key component of any health human resources strategy for Canada. The development of infrastructure and technology is not only compatible with this sentiment, but in fact intrinsic to its realization. It is anticipated that interprofessional teams catering to a patient will often not share the same geographical location; in such instances, the use of modern communication technology will be a critical component in the success of such teams.

Evidence suggests that technology adoption in Canada's health care systems has often lagged behind that of many other countries. This is not because of any general resistance to the opportunities offered to health care providers by new technology, but instead because the funds or human resources to adopt that technology in an effective way may have not have been made available. For example, the introduction of telehealth provides effective means of dealing with a wide range of health conditions. However, without the needed human resources to staff the telehealth programs, the net effect on productivity will not reflect the full potential of the new technology. Acceptance of new technology may also be hampered by lack of demonstrated evidence of the direct benefits to health care providers. The measures proposed in core strategy 5b may help address this challenge.

The benefits of technology in healthcare can only be reaped if a conducive atmosphere exists within the provider community that encourages them to buy into and accept such changes. Such an atmosphere is most likely to occur if providers are involved in both the development and application of technology at the grassroots level. Currently, there is a sense among the provider community that they have been excluded from technology-focused initiatives, which have been primarily government-driven – e.g. the Canada Health Infoway (CHI).

When such a sense of exclusion prevails, obtaining the buy-in of providers becomes a difficult proposition. In fact, all relevant stakeholders, including health professionals, health authorities, the public, and the private sector (which is the source of technological innovation) need to be included if this strategy is to be effective. The involvement of these stakeholders needs to be formalized through concrete measures; for instance, the Board of the CHI could be enhanced to include representation from providers, the private sector, health organizations, the public, etc.

Inclusiveness is one means of obtaining the input and support of the provider community. Another element is the need to demonstrate the direct and measurable benefit of health technologies. If providers do not perceive a direct benefit from the use of such technology, then the hiring of human resources is likely to be seen as a more attractive proposition than investment in technology.

In addition, the costs of change/implementation should be identified and accommodated as part of the costs of technology. This requires also factoring the cost of information management tools and knowledge transfer among the user community. While providers may be accepting of an initial reduction in productivity during the learning process, there must be a value proposition whereby the provider soon sees increases in efficiency. If there is no direct benefit and requires extra hours each week to comply, there will be minimal acceptance.

Leaving providers to incur the costs of implementation may affect providers' willingness to adopt these technologies or their satisfaction with the technologies. The introduction of new technologies is also often hampered by lack of interoperability, which enables various technologies to interact. Finally, new technologies need to be evaluated for safety and effectiveness before widespread marketing to target audiences such as provider groups or patients is commenced.

The creation of a wired healthcare system requires not only the buy-in of providers but also the unambiguous support of the public. This will only be feasible if privacy issues are addressed. The privacy of health records is considered to be of paramount importance by the Canadian public, and their support for technological innovations (such as telemedicine) will only be achieved if there is an assurance that privacy is secure.

The 'wiring' of the health care system will require a concomitant change to education and training. For instance, medical students, residents and other health professionals should experience an integrated, interconnected, and interprofessional clinical setting.

It is critical that any measures proposed need to work in concert with other ongoing projects, such as the CHI. A stated goal of the CHI is to improve access to health care, which is in keeping with the mandate of the task force. Additionally, initiatives are underway in Alberta and the other western provinces, and at the Canadian Institute for Heath Information (CIHI).

The achievement of this core strategy will clearly require the joint and mutually reinforcing efforts of various stakeholders. It was suggested by Conference delegates that a forum be established in this regard, bringing together CHI, a sub-group of Advisory Committee on Health Delivery and Human Resources, CIHI, and physicians and nurses.

5b Create and maintain an up-to-date inventory of specialized medical equipment and technology and continue to invest appropriate funds to achieve the required future stocks of medical technologies.

Because medical technology is a dynamic concept, investment is a continual process. Similarly, health care needs continually change in terms of the levels, nature and distribution within the population. For example, the lithotripter at one stage provided an important opportunity for changing treatment methods for certain conditions (e.g., gallstones and

kidney stones), but this was superseded in many cases by the developments in 'keyhole' surgical techniques.

Many technology initiatives fail or are not sustained because it is not made apparent to providers that tangible, meaningful benefits can be realized by the new technology. Conducting benefits measurement studies is an important strategy to facilitate the integration of new technologies. The findings of such studies could be included in the inventory. With such information readily available, it will be far easier to communicate success stories of technology implementations in terms of clear, quantitative and objectively measured benefits and will help build the trust and support of physicians and other providers for future initiatives.

Inventories need to be more than a retrospective list of equipment. To ensure the optimal benefits of any inventory, it will be necessary to rationalize its use, and therefore its form and content. For example, determining a priori the use of the inventory will help resolve whether the inventory is to include only large items (e.g., MRIs) or a more comprehensive set of information, such as date of anticipated obsolescence, and a wider range of technological and medical resources. Such an exercise will also entail determining if these inventories should be local, regional, provincial-territorial or national. This rationalization must also occur as part of an ongoing process and allow for the introduction of new technologies and other medical resources. Ideally, having established pan-Canadian benchmarks and standards of care would help ensure that acquisition and use of technology and medical equipment are less ad hoc

The logistics of creating such an inventory will have to be given further consideration. For instance, it is to be determined whether the responsibility for creating the inventory would fall upon individual health units, regional authorities, or at the provincial level.

Finally, the inventory of specialized medical equipment must also build upon previous work undertaken in this direction. For instance, CIHI's special reports and data collection related to medical imaging could be expanded to other forms of equipment.

5c Create and maintain an up-to-date inventory of physical infrastructure for both health provider education and health care delivery, and invest appropriate funds to achieve the required future stock of infrastructure.

As with medical equipment, physical infrastructure (e.g., hospitals, institutions, facilities and clinics) is a dynamic concept; but unlike medical equipment, its supply often involves long periods of major construction. Thus, investment in physical infrastructure is usually less flexible than other forms of investment in the health care system. Physical infrastructure needs are currently acute and will undoubtedly worsen in the future with changing demographics and their attendant health care needs – for instance, with Canada's ageing population the need for long-term care facilities is likely to increase.

Similarly, physical infrastructure issues in the medical education and training system are increasingly becoming critical, particularly with current and anticipated future increases in the number of trainees. Limitations of physical infrastructure have an indelible impact on the medical education and training environment. For instance, because of space limitations the tendency for small learning groups to grow in size has been observed. This begs

questions about the optimal teaching ratio. Evidence is required on the potential impact of such larger learning groups on learning outcomes. This also extends to community settings where teaching is increasingly occurring. For example, physical infrastructure issues arise when residents undergo community training in physician office-based settings.

Effective planning is therefore required to avoid major shortfalls or surpluses in physical capacities and the impact these have on health care productivity. For example, planning for the population's needs for hip surgery requires that an appropriate mix of human and physical resources be available to meet the prevailing needs. Having the right number of surgeons will not be sufficient if there are insufficient operating rooms available to perform the surgeries.

There is no precedent in Canada of documenting the existing physical infrastructure for education and health care delivery; thus, the implementation of this strategy would be a pioneering effort to fill a clear gap within the Canadian healthcare environment. One of the first tasks in developing such an inventory would be to arrive at a common standard of measurement (e.g. measuring the lifecycle of a building).

Given CIHI's pre-existing work in developing an inventory of medical equipment, it is suggested that this initiative could also be led by this organization.

SECTION 3
NEXT STEPS

3.1 CREATING A TRANSITION WORKING GROUP TO CONTINUE THE WORK OF TASK FORCE TWO

Task Force Two is cognizant of the collective call to action to address the immediate and long-term issues expressed by delegates at the January 2006 National Physician Conference and the need to build on the work completed by the Task Force and other HR initiatives including the Framework for Collaborative Pan-Canadian Health Human Resources Planning adopted by the federal/provincial/territorial Advisory Committee on Health Delivery and Human Resources. To this end, Task Force Two proposes the creation of a Transition Working Group that will explore the feasibility of creating a coordinating body or mechanism proposed in this report. Some of the general objectives that could be accomplished by such a body or mechanism have been described in this report and include but are not limited to: supporting the efforts of planners across the country, conducting much needed research and data analysis on an ongoing basis, providing leadership and policy direction related to HHR planning in Canada, and helping governments, educators, employers and professional bodies better anticipate emerging issues and provide solutions when they are needed.

3.1.1 PROPOSED OBJECTIVES OF THE TRANSITION WORKING GROUP

The objectives of the proposed Transition Working Group would include, but not necessarily be limited to:

- Exploring the interest and support for a body/mechanism, including the possibility of building on existing structures;

- Identifying the approach, including the stakeholders who would be involved to achieve the creation of a body/mechanism;
- Identifying short-medium-long term goals/actions for the body/mechanism; and,
- Exploring collaboration on other HR issue areas common across health care providers.

In addition, the Transition Working Group could address the interest manifested on numerous occasions to establish a permanent and up-to-date inventory of health care models, building on the concept developed by the task force as part of its work plan. The Working Group could also discuss means to disseminate and/or adjust the analytic framework developed by the task force to assist with the assessment that various health care modes have on physician human resources.

3.1.2 PROPOSED PARTICIPATION ON THE TRANSITION WORKING GROUP

As a starting point, it is proposed that representatives from medicine, nursing and pharmacy, as well as employers and governments, be initially invited to participate in the Transition Working Group since much work in the realm of human resources has been completed or is currently under way for these health professions. As considered appropriate, other health professions and stakeholder groups would be welcome throughout the interim phase. Participation from federal/provincial/territorial governments, educational organizations and employers would also be required.

SECTION 4
GLOSSARY OF TERMS

Continuous Quality Improvement (CQI): CQI is a process of quality management which builds upon traditional quality assurance methods by emphasizing organizational and systematic factors and processes. In doing so, CQI promotes the need for objective data to analyze and improve processes. The focus is on "process" rather than the individual while recognizing the place of individuals both internal and external to the organization and system under consideration. CQI is a quality management philosophy which holds that most things can be improved and applies a method of serial experimentation (the scientific method) to everyday practice settings to meet both the needs of those served and improve the services offered.

Electronic Health Record (EHR): A record that is available electronically to authorized health care providers and to the individual patient anywhere and anytime, in support of high-quality care. It is intended to provide individuals in Canada with a secure and private lifetime record of their key health history and care within the health system.

Electronic Medical Record (EMR): A record of periodic care, typically owned by a single provider organization, which captures and manages patient data. It is a complete patient record accessible from a single, automated health care provider system.

Harmonization of regulatory processes: The identification and implementation of common or complementary processes among jurisdictions for the regulation of health care providers in order to provide uninhibited movement of providers across jurisdictional boundaries in the public's best interest.

Interoperable EHR System and Health Information System: Strategies that are based on *Canada Health Infoway*'s Blueprint for interoperability. The Blueprint allows jurisdictions to develop systems that meet their own priorities, with the assurance that all shared components will be compatible.

Interprofessional Education: Occasions when two or more professions learn from and about each other to improve collaboration and the quality of care.

Interprofessional Education for Collaborative Patient Centred Practice (IECPCP): Interprofessional education involves health care providers learning together, learning to work together, sharing in problem solving and decision making, to the benefit of patients. Collaborative patient-centered practice is designed to promote the active participation of several health care disciplines and professions. It enhances patient-, family-, and community-centered goals and values, provides mechanisms for continuous communication among health care providers, optimizes staff participation in clinical decision making (within and across disciplines), and fosters respect for the contributions of all providers.

Jurisdictional interdependence: The efficient planning, management and delivery of health care services is crucially dependent on the corresponding activities of other jurisdictions. This cannot be achieved in isolation and must incorporate consideration of what is happening in other jurisdictions.

Needs-based: Planning or delivery of services is organized on the basis of the levels and distribution of needs for care in the population.

Patient: All recipients of health care delivery and includes populations often referred to as clients, beneficiaries, etc.

Pan Canadian framework for HHR planning: The conceptual framework adopted by the Advisory Committee on Health Human Resources for the Conference of Federal/ Provincial/Territorial Deputy Ministers of Health.

Personal Digital Assistants (PDA): A hand-held device used for accessing information. The most common medical use for PDAs is to access drug information, with some physicians using their handhelds to look up standard lab values, refer to medical textbooks and help in billing and coding.

Quality Assurance (QA): QA is comprised of policies, procedures, educational programmes and systematic actions which seek to ensure that standards of practice and service delivery meet necessary performance requirements in order to maintain the required degree of confidence in, and competency of, the profession and its abilities. QA can be seen in a number of ways through the use and development of practice guidelines and/or standards of care; mandatory continuing professional education, quality assessment and remediation and discipline of professionals.

Risk Management (RM): RM is an ongoing, proactive review and leadership process that seeks to minimize or eliminate errors and liability before they occur. To be effective, risk management must consistently and continually ask and answer three basic questions: 1) What can go wrong? (risk identification); 2) What will be done (both to prevent and/or reduce the harm from occurring and in the aftermath of an "incident")?; and 3) If something happens, how will the harm/damage be paid for it, how will it be rectified? Some strategies for risk management include the use of "best practices", Quality Assurance and Continuous Quality Improvement programmes, Continuing Professional Education, prudence and "thinking two-steps ahead" in a systematic and goal oriented fashion.

'Social role' of medical schools: Responsibility of medical schools to reflect the characteristics of the population it serves and to organize its training and research programmes in ways that respond to the health care needs of that population.

Surge Capacity: Refers to the capacity of human and non-human resources in the health care system to respond to surges or sudden, sharp increases in the need for health care services. The capacity to respond to pandemic influenza would be an example of such a scenario.

Wired Medical World: A "wired medical world" encompasses a wide range of communication and information technologies (e.g., electronic health records, telehealth, telemedicine, teletriage, and wireless handheld technology) to support optimal service delivery. It assumes sustainable funding for the appropriate use of these technologies.

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SECTION 6
REFERENCES

[1] Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources. A Framework for Collaborative Pan-Canadian Health Human Resources Planning. September 2005.

[2] Nursing Sector Study Corporation. Building the Future: An integrated strategy for nursing human resources in Canada: Phase 1 Final Report. May 2005.

[3] Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources. (September 2005)

[4] Federal/Provincial/Territorial Advisory Committee on Health Delivery and Human Resources. (September 2005). Recommendation 3.

[5] Health Canada. (2001).Social Accountability: A Vision for Canadian Medical Schools.

[6] Jones J (2002) Concerns mounting over pediatric workforce. CMAJ 166(8): 1076.

[7] Marschall JG and Karimuddin AA (2003) Decline in popularity of general surgery as a career choice in North America: review of postgraduate training selection in Canada, 1996-2001. World J Surg 27(3): 249-52.

[8] Turnberg, L. (2000). Survival of the general physician. BMJ, *320*, 438-440.

[9] Loefler, IJP. (2000). Are generalists still needed in a specialised world?. BMJ, *320*, 436-438.

[10] Barondess, J. A. (2000). Specialization and the physician workforce: drivers and determinants. JAMA, *284*(10), 1299 - 1301.

[11] Pollett, W. G., & Harris, K. A. (2002, April). The future of rural surgical care in Canada: a time for action. Canadian Journal of Surgery, 45(2). Retrieved (September 2005), from Canadian Medical Association at: http://www.cma.ca//multimedia//staticcontent/html/N0/l2/cjs/vol-45/issue-2/pdf/pg88.pdf.

[12] Ferrer, R. L., Hambidge S. J., and Maly R. C. (2005). The essential role of generalists in health care systems. Annals of Internal Medicine, *142*(8), 691-699.

[13] RCPSC. (1996). Report of the task force to review fundamental issues in specialty education. Ottawa, ON.

[14] Repairing the foundation: the future of primary care [Editorial]. (2004, May 11). *CMAJ*, 170(10). Retrieved September 15, 2005, from http://www.cmaj.ca/cgi/content/full/170/10/1509.

[15] Schwartz, M. D., Basco Jr. W. T., Grey M. R., Elmore, J. G., and Rubenstein A. (2005). Rekindling student interest in generalist careers. Annals of Internal Medicine, 142(8), 715-724.

[16] RCPSC. OE News (Spring 2005). Vol 2(3).

[17] RCPSC. OE News (December 2005). Vol 3(1).

[18] Marlow B (2004) The future sponsorship of CME in Canada: Industry, government physicians or a blend? CMAJ 171(2): 150–1.

[19] Lofsky S., Dawes R. Martin D. McNestry G. Tandan V. Tepper J. The Ontario Physician Shortage 2005: Seeds of Progress, but the Resource Crisis Deepening." Ontario Medical Review.

[20] Cultural safety generally refers to what is felt or experienced by a patient when a health care provider communicates with the patient in a respectful, inclusive way, empowers the patient in decision-making and builds a health care relationship where the patient and provider work together as a team to ensure maximum effectiveness of care. Cultural safe encounters require that health care providers treat patients with the understanding that not all individuals in a group act the same way or have the same beliefs (Source: National Aboriginal Health Organization)

[21] Cultural competency refers to the capacity of health care providers to successfully provide culturally safe care.

[22] Health Canada. Interprofessional Education for Collaborative Patient-Centred Practice (IECPCP). Retrieved (February, 2006) from Health Canada at: www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/interprof/index_e.html

[23] College of Family Physicians of Canada and Royal College of Physicians and Surgeons of Canada. Family Physicians and Other Specialists: Working and Learning Together. 2006 (in development and soon available at http://rcpsc.medical.org and www.cfpc.ca).

[24] Task Force Two. Validating the Range and Scope of New Models for the Delivery of Medical Services: Final Report and Synthesis. October 2004.

[25] Canadian Medical Association. (January, 2006). National Physician Survey 2004: Remuneration modes and Remuneration Preferences. Retrieved (January, 2006) from Current Activities at: www.cma.ca/index.cfm/ci_id/46353/la_id/1.htm

[26] Manitoba Centre for Health Policy. MCHP Glossary and Related Terms. Retrieved (February 2006) from University of Manitoba at: www.umanitoba.ca/centres/mchp/concept/thesaurus/thesaurus.glossary.html

[27] Ibid.

[28] Canadian Institute for Health Information. National Health Expenditure Trends, 1975-2005. Retrieved (March 2006) from CIHI at: http://www.cihi.ca/cihiweb/dispPage.jsp?cw_page=download_form_e&cw_sku=NHEXTRENDS05PDF&cw_ctt=1&cw_dform=N

[29] Health Canada**.** Interprofessional Education for Collaborative Patient-Centred Practice: An Evolving Framework: Chapter 10. Retrieved (February 2006) from Health Canada at: www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/interprof/chap-10_e.html

[30] Borrill CS, Carletta J, Carter AJ et al. (2001). The Effectiveness of Health Care Teams in the National Health Service. Aston University, UK.

[31] Health Canada. Interprofessional Education for Collaborative Patient-Centred Practice: An Evolving Framework: Executive Summary. Retrieved (February 2006) from Health Canada at: www.hc-sc.gc.ca/hcs-sss/hhr-rhs/strateg/interprof/summ-somm_e.html

[32] Henderson MC, Hunt DK and JW Williams Jr. General internists influence students to choose primary care careers: the power of role modeling. The American Journal of Medicine, Vol. 101, Issue 6, 648-653, Dec. 1996.

[33] Canadian Federation of Medical Students (2003). *I*CFMS Position Paper, August 14, 2003.

[34] Senf JH,.Kutob R, Campos-Outcalt D. Which Primary Care Specialty? Factors and Relate to a Choice of Family Medicine, Internal Medicine, Combined Internal Medicine-Pediatrics or Pediatrics. Journal of Family Medicine, Vol. 36 No. 2, February 2004.

[35] National Physician Survey 2004 College of Family Physicians of Canada (CFPC), Canadian Medical Association (CMA), Royal College of Physicians and Surgeons of Canada (RCPSC). Table 6. http://www.cfpc.ca/nps/English/pdf/Residents(PGY2)/Physicians/Tables/Tables/Q6.pdf

[36] Task Force Two. Assessment of Health Care Delivery Models: Implications for Physician Human Resources. February 2006.

[37] Southwest Health. Physician Recruitment. Retrieved (March 2006) From South West Health at: http://www.swndha.nshealth.ca/phyrcrt.htm

[38] Pong W. Russell N. (2003) A Review and Synthesis of Strategies and Policy Recommendations on the Rural Health Workforce. Centre for Rural and Northern Health Research. Laurentian University. Retrieved (March 2006) from Laurentian University at: http://www.laurentian.ca/cranhr/pdf/TORC_Ruralhealthworkforcesynthesis-finaldraft-May.pdf

[39] Barer M. Stoddart G. Improving Access to Needed Medical Services in Rural and Remote Communities: Recruitment and Retention Revisited. Centre for Health Services and Policy Research. University of British Columbia. Retrieved (March 2006) from Centre for Health Services and Policy Research at: http://www.chspr.ubc.ca/hhru/pdf/hhru99-05.pdf