

# Validating the Range and Scope of New Models for the Delivery of Medical Services

FINAL REPORT AND SYNTHESIS



OCTOBER 2004



**A Physician Human Resource  
Strategy for Canada**

TASK FORCE TWO

**Une stratégie en matière d'effectifs  
médicaux pour le Canada**

GRUPE DE TRAVAIL DEUX

# **Validating the Range and Scope of New Models for the Delivery of Medical Services**

## **FINAL REPORT AND SYNTHESIS**

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**For**

**Task Force Two:  
A Physician Human Resource Strategy for Canada**

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# EXECUTIVE SUMMARY

## ***INTRODUCTION***

Task Force Two was established to focus on human resource issues related to the delivery of medical services and the future of the physician workforce. It also focuses on the incorporation of information from other health human resource studies currently underway and their associated implications.

The Task Force Two initiative consists of three phases. Phase 1 focused on a review of the factors influencing the physician labour market as well as a review of new and emerging health care delivery models. Phase 2 involves a comprehensive analysis of issues impacting the supply of, and demand for, physicians. Phase 3 will focus on the development of a human resource strategy for physicians in Canada. Task Force Two is currently in the second phase of its three phase project.

As part of Phase 1 activities, an inventory and synthesis of 154 innovative, new, emerging and/or existing service delivery and/or funding/remuneration models in Canada were developed.<sup>1</sup> The information gathered for the inventory is important for the subsequent research and planning activities of Task Force Two. In order to ensure that

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<sup>1</sup> In order to be included in the inventory, innovative, new, emerging, and existing models needed to: (a) have substantial physician involvement and/or impact; (b) be focused on collaborative approaches with other physicians and/or health care professionals and/or on new funding approaches; and (c) demonstrate innovation in one or more of the following areas: the organization, interaction and management of human health resources; the coordination and/or integration of health care delivery systems and processes; resource utilization; funding and remuneration; use and deployment of technology; the development and/or application of evidence based standards or best practices.

the inventory is reflective of the full range of models in Canada, the models in the existing inventory are, through the current project, being validated as part of the Phase Two activities of Task Force Two.

The objectives of the current project are to:

- Conduct a validation study of the existing inventory to determine if the inventory is a good representation of innovative service delivery and/or funding/remuneration models that involve physicians; and
- Identify new models that may be appropriate to include in the inventory.

As with the creation of the original inventory, the models selected for the current project are *examples* of innovative, new, emerging and/or existing models of care. It was *not* the purpose of this project to develop an exhaustive catalogue of every model in every jurisdiction. It was also not the purpose of this project to update, modify, or delete models from the original inventory of 154 models.

## **VALIDATION OF THE EXISTING INVENTORY**

The first objective of the current project was to validate the set of models in the inventory to ensure that they were reflective of the full range of innovative, new, emerging and existing models in Canada. A total of 51 interviews were conducted with 60 individuals regarding the original inventory. These individuals represented: national organizations;<sup>2</sup> provincial/territorial Deputy/Assistant Deputy Ministers of Health; regional health authorities; provincial/territorial medical associations/societies; health sciences centres and hospitals; medical schools; and research and funding agencies.

Overall, there were 14 interviews and 21 respondents from Provincial/Territorial Ministries of Health; 14 interviews and 14 respondents from Regional Health Authorities; 13 interviews and 13 respondents from a combination of Health Sciences Centres and Hospitals, Provincial/Territorial Medical Associations/Societies, and Medical Schools; and 10 interviews and 12 respondents from National Organizations and Research and Funding Agencies. In terms of geographic distribution, 6 interviews and 7 respondents represented National Organizations. There were 9 interviews and 11 respondents from Atlantic Canada, 10 interviews and 13 respondents from Ontario and Québec,<sup>3</sup> 20 interviews and 23 respondents from Western Canada and 6 interviews and 6 respondents from the three territories.

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<sup>2</sup> National organizations included physician oriented organizations, as well as organizations focusing on other health care professionals. Research and funding agencies included both stand-alone organizations as well as organizations which were affiliated with academic institutions

<sup>3</sup> Many of the representatives of the National Organizations were also from Ontario.

During the interview, informants were asked to:

- Comment on the extent to which they felt the current inventory of models reflected new and innovative practices in their province and in the area of health care in which they work;
- Comment on the extent to which they felt that current innovations provide insights into how medicine will be practiced and funded in the future;
- Identify any other factors that they felt would have a substantial impact on how medicine is practiced and funded in the future;
- Identify any models which they were aware of which were similar to those that are already included in the inventory;
- Identify any models which they were aware of which they felt should be added to the inventory; and
- Identify any innovative international models of care that may be relevant to the Canadian context.

The key findings from this component of the study indicated that:

- People who were contacted regarding the current study generally appeared to be familiar with the work of Task Force Two.
- The inventory was originally developed as a tool for Task Force Two to try to identify future trends in human resources issues for physicians but respondents clearly saw the inventory as a significant resource for themselves and the organizations they represented.
- Overall, there was fairly good support for the inventory : 59.6% of those who responded stated that they felt the inventory reflected new and innovative practices in their province and 66.7% felt it reflected the area of health care in which they worked.
- A number of respondents were only somewhat supportive of the inventory but this often had to do with not having enough information; it had not been possible to provide electronic access to the full text of the models in the inventory.
- Overall, 14.8% of respondents had negative comments about the inventory; many of these respondents felt the inventory did not fully reflect the range of models in their province or expressed other types of dissatisfaction with the inventory. Other negative comments appeared to reflect frustration that the inventory fell short of some ideal notion about what such an inventory should be, and/or about the fact that it was representative but not exhaustive.
- While there were some negative comments about the inventory, most of those who responded stated that the inventory represented a good range of existing models. Respondents from Provincial/Territorial Medical Associations/Societies, Medical Schools and Health Sciences Centres and Hospitals were the most positive while representatives of Provincial/Territorial Ministries of Health and Regional Health Authorities were the least positive.
- Several respondents noted that having evaluation information on the various models was critical for understanding the importance of the models.

- The majority of those who responded (66.0%) did not provide any information regarding innovative international models. Some respondents questioned the potential applicability of international models to the Canadian context and observed that a lot of time, effort and energy could be spent documenting a literature that is quite extensive but that political, cultural and other constraints may make it difficult to apply the models to Canada.
- In order to be useful to individuals such as the respondents, the inventory would need to be maintained. Several respondents wanted to know how the inventory would be maintained and kept current.
- Approximately half (52.2%) of respondents indicated that they felt the innovations were generally insightful. A further 41.3% indicated they thought the innovations were moderately insightful.

Respondents were asked to identify factors they believe will impact on how medicine is practiced and/or funded in the future. Several factors were identified including: supply and demand; changing practice profiles; expectations and lifestyle choices of new physicians; remuneration; relationships with other care providers; information technology; formal linkages between physician services and management in regional health authorities and districts; provider involvement in planning; and consumer/patient activism.

### ***IDENTIFICATION OF NEW MODELS***

The second objective of the current project was to ensure that the inventory of models was reflective of the full range of new and emerging models in Canada. Thus, as part of the validation phase, respondents were asked to identify models which they felt were similar to those already included in the inventory as well as models which they felt were new and should potentially be added to the inventory.

Overall, some 75% of respondents identified one or more models (for a total of 71 models) that were similar to the models noted in the inventory. Some 39% of respondents identified one or more new models (for a total of 74 models) that they felt should be considered for inclusion in the inventory. In addition, 15 international models/programs/approaches were identified. All of the models identified by the respondents were reviewed by the researchers and the Task Force Two Project Working Group. In some cases, models identified as similar to those in the existing inventory were considered different enough to potentially be included. In other cases, models identified as new were considered to be similar to models already in the inventory.

A total of 27 additions to the inventory were identified. The new models were selected based on the criteria used to develop the original inventory. In general, the new models appear to be different from models in the existing inventory and/or they address one or more of the factors that respondents from the validation phase felt would have a substantial impact on how medicine is practiced and funded in the future.

Nine of the new models were located in Ontario, four were located in Alberta, Manitoba and Québec each had three, British Columbia and Newfoundland each had two and the Yukon, Nunavut, Saskatchewan and New Brunswick each had one. Overall, considering all 181 models, the six jurisdictions with the highest number of models were Ontario (41), National (27), Alberta (26), Québec (14), Manitoba (12) and Nova Scotia (12).

Overall, there seemed to be a clear and qualitative difference in the models documented in this project compared to the original project conducted in Phase 1. Most of the models in the earlier study focused on innovative methods to provide care services, *per se*. In contrast, the models in this study seemed to focus on integrating or coordinating the provision of care, or expanding the scope of activities from the provision of care to education and training or other related activities. Even when models focused more directly on care provision, there were often still some coordination type aspects. Thus, a new category of Care Facilitation/Coordination was added to our list of types of health services.

Nine of the new models were categorized into the Care Facilitation/Coordination category. In addition, there were seven new models related to funding, four new models on Primary Health Care, two models on telehealth, two models on the integration of a range of care services, and three models related to Mental Health.

The inventory constitutes a reasonably broad selection of models across Canada and includes concrete examples of the different factors that are thought to have an impact on the way medicine is practiced and funded now, and how it may be practiced and funded in the future. However, the inventory also has several limitations. First, the models included in the inventory existed at two particular points in time and some models have changed over time (e.g., they may have been discontinued or expanded). Second, the models in the inventory should be considered to be *examples* of what is occurring in Canada, not as the only issues being addressed in a particular jurisdiction or type of organization. Third, while the inventory appears to be quite comprehensive, some of the respondents in the current study felt that it could be improved, but suggestions appeared to depend on respondents' views of what an ideal inventory should contain. Fourth, in the Phase 1 study, Task Force Two was interested in identifying relevant international models. However, in the current study, only a small number of respondents provided suggestions for international models.

## **DISCUSSION**

In both the Phase 1 study and the current study, we asked respondents to assist us in identifying factors which they felt currently had, or could have, an impact on the way medicine is practiced and/or funded. Some of the factors identified in the Phase 1 study overlapped with some of the factors identified in the current study. When the factors from both studies are combined, there appear to be seven key factors which may have an impact on physician human resources in the future. These are: supply and demand; changing practice profiles; working in collaborative teams; information technology;

evidence-based practice; remuneration; and physician involvement in planning. In addition, the current study identified two key trends that will need to be monitored in the future. These were the development of comprehensive primary care frameworks in several provinces and an increasing interest regarding physician involvement in systems reforms.

Several of the respondents in the current study commented on the importance of evaluating new and innovative models in order to determine their overall importance, specific strengths and weaknesses, sustainability in the long term, applicability to other settings, and similar factors. The issue of evaluation has also been raised by Task Force Two. There appear to be at least three aspects to the issue of evaluation. These are: the evaluation of models in the existing inventory; recognizing the importance of evaluation for new initiatives; and the use of evaluation as a method for determining the importance of a model.

Respondents in both the Phase 1 study and the current study expressed an interest in the inventory. Although the inventory was developed for use by Task Force Two, it is heartening to know that it has been seen by representatives of national organizations, Ministries of Health, Medical Associations, and so on, as having wider applicability. If the existing inventory (or a modification of it) were to be made more widely available, several steps would need to be taken to ensure that its contents were relevant to the target user groups. First, the purpose of the inventory would need to be clearly defined. Second, the target user group(s) would need to be articulated. Third, the scope of the inventory would need to be defined; the scope would depend in part on the purpose of the inventory as well as the target user group(s). Fourth, thought would have to be given to how the inventory could and would be kept up-to-date. Fifth, thought would have to be given regarding who should be responsible for maintaining the inventory.

Based on the findings from both the Phase 1 study and the current study, the following recommendations are made:

**RECOMMENDATION 1:** Task Force Two should use the current inventory of models (which includes models from both Phases 1 and 2) as one of several tools in developing their physician human resources strategy.

**RECOMMENDATION 2:** Task Force Two should recommend that funding for the development and evaluation of new and innovative health service delivery and/or funding/remuneration models should be available on an ongoing basis. It would also be desirable if this funding could be extended to the development and evaluation of clinical practices for key health professions such as physicians.

**RECOMMENDATION 3:** Task Force Two should approach an appropriate organization (such as Health Canada) regarding taking on responsibility for the ongoing development and maintenance of an inventory of health service delivery and/or funding/remuneration models which would have relevance for physician human resources in Canada.

**RECOMMENDATION 4:** Task Force Two should develop a communications document (which could be included on the Task Force Two website and/or distributed in other ways) which clearly indicates how the existing inventory will be used by Task Force Two and what Task Force Two is recommending be done with the inventory in the future.

## **CONCLUSION**

The inventory of models was originally intended to provide Task Force Two with insights regarding how the practice of medicine will evolve over time. The existing inventory appears to be comprehensive enough to meet this goal. However, the inventory contains a wide variety of models and thus steps must be taken to determine whether some models are more relevant for Task Force Two's purposes than others. It is believed that the existing inventory will be useful in developing a physician human resources strategy. However, the inventory was developed and validated at specific points in time. As part of the development of the strategy, Task Force Two will need to look at the potential impact of changes that have currently been identified as trends. Finally, Task Force Two will also need to consider the impact that other activities, such as an increased focus on health care at both the federal and provincial/territorial levels, may have on the development and implementation of a physician human resource strategy for Canada.

## ACKNOWLEDGEMENTS

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We extend our thanks to the team members who contributed to the data collection phase of the study: Susanna Janowitz, Paul Pallan, Leah Siebold, and Robert Sullivan. We also extend our thanks to Darca Tkach, Jason Verbitsky and David Holt for their assistance with the project.

Finally, but most importantly, we thank all of the individuals who participated in the study and/or provided us with supporting documents for the narratives.

# 1. INTRODUCTION

Traditional health care delivery models and the roles of physicians and other health care providers are under scrutiny in the face of major changes such as regionalization, funding constraints and the associated stress on human and material resources. One response to coping with these pressures is to adopt innovative new models and tools while maintaining a focus on improving outcomes, efficiency, satisfaction, access, quality and accountability. Given the large role human resources play in our health care system, changes in roles and applications that optimize delivery outcomes are particularly important.

Task Force Two was established to focus on human resources issues related to the delivery of medical services and the future of the physician workforce. It also focuses on the incorporation of information from other health human resource studies currently underway and their associated implications. Task Force Two is a partnership involving the medical profession, provincial and territorial governments, Human Resources and Skills Development Canada, Health Canada and other components of the health care system.

The objectives of Task Force Two are to:

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

The Task Force Two initiative consists of three phases. Phase 1 focused on a review of the factors influencing the physician labour market as well as a review of new and emerging health care delivery models. Phase 2 involves a comprehensive analysis of issues impacting the supply of, and demand for, physicians. Phase 3 will focus on the development of a human resources strategy for physicians in Canada. Task Force Two is currently in the second phase of its three phase project.

As part of Phase 1 activities, an inventory and synthesis of innovative, new, emerging and/or existing service delivery and/or funding/remuneration models in Canada were developed.<sup>1</sup> Full descriptions of each of the 154 models are presented in the inventory which is available in both paper and electronic forms. The electronic version of the inventory can be distributed via CD, e-mail attachment or the Internet. The inventory was intended to be representative rather than exhaustive and the models presented were examples of innovative, new, emerging and/or existing models of care. It was not the purpose of the Phase 1 project to develop an exhaustive catalogue of all innovations.

The information gathered for the inventory of service delivery and/or funding/remuneration models is important for the subsequent research and planning activities of Task Force Two. In order to ensure that the inventory is reflective of the full range of models in Canada, the models in the existing inventory are, through this current project, being validated as part of the Phase 2 activities of Task Force Two.

Specifically, the objectives of the current project are to:

- Conduct a validation study of the existing inventory to determine if the inventory is a good representation of innovative service delivery and/or funding/remuneration models that involve physicians; and
- Identify new models that may be appropriate to include in the inventory.

Again, the models selected for this current project are examples of innovative, new, emerging and/or existing models of care. It was *not* the purpose of this project to develop an exhaustive catalogue of every model in every jurisdiction. It was also not the purpose of this project to update, modify, or delete models from the original inventory of 154 models.

This document constitutes the final report of the project.

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<sup>1</sup> In order to be included in the inventory, innovative, new, emerging, and existing models needed to: (a) have substantial physician involvement and/or impact; (b) be focused on collaborative approaches with other physicians and/or health care professionals and/or on new funding approaches; and (c) demonstrate innovation in one or more of the following areas: the organization, interaction and management of human health resources; the coordination and/or integration of health care delivery systems and processes; resource utilization; funding and remuneration; use and deployment of technology; the development and/or application of evidence based standards or best practices.

## 2. VALIDATION OF THE EXISTING INVENTORY

### 2.1 *PURPOSE OF THE VALIDATION PROCESS*

One of the objectives of the current project was to validate the set of models in the inventory to ensure that they were reflective of the full range of innovative, new, emerging and existing models in Canada. The purpose was to ensure that the inventory represents a full range of models, *not* to ensure that every new or innovative model in Canada is documented in the inventory. However, it is recognized that it is important to identify key models that are emerging across the country.

### 2.2 *METHODS*

A list of 90 potential key informants was initially developed jointly by the researchers and members of the Project Working Group. As the researchers were contracted to conduct between 40 and 60 interviews for this phase of the study, it was necessary to pare the list down substantially. A final list of 63 potential respondents was developed for this phase of the project. These individuals represented: national organizations; provincial/territorial Deputy/Assistant Deputy Ministers of Health; regional health authorities; provincial/territorial medical associations/societies; health sciences centres and hospitals; medical schools; and research and funding agencies.<sup>2</sup>

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<sup>2</sup> National organizations included physician oriented organizations, as well as organizations focusing on other health care professionals. Research and funding agencies included both stand-alone organizations as well as organizations which were affiliated with academic institutions

All of the individuals on the final list of potential key informants were faxed a letter of support which was signed by the Co-Chairs of Task Force Two as well as a letter from Hollander Analytical Services Ltd. which explained the purpose of the project and indicated that the researchers would contact them shortly to determine their willingness to participate in a 20 to 30 minute telephone interview regarding the current inventory.

Some of the potential respondents referred us to another individual who they felt would be a more appropriate person with whom to speak. Other potential informants referred us to an individual who was already on the list. In some cases, we made repeated efforts through a variety of means (e.g., phone, fax, e-mail) to contact a potential key informant but were unable to make direct contact with the individual to determine if he/she was willing to participate in the study. In other cases, we were told that the potential respondent would contact us. Only two potential respondents refused to participate in the study and did not identify an alternative potential respondent. Six potential respondents were eliminated from the study by the researchers after repeated attempts to contact them through a variety of means did not prove to be successful.

In total, we contacted 99 individuals and were able to book 51 interviews. These interviews involved a total of 60 respondents (some interviews involved multiple respondents). Table 1 presents the number of potential key informants initially identified, the number of individuals contacted, the number of interviews conducted, and the total number of individuals interviewed, by type of organization.

**Table 1: Number of Interviews and Participants by Type of Organization**

Type of Organization	# of Individuals from Original List	# of Individuals Contacted*	# of Interviews Conducted	# of Interview Participants**
National Organizations	6	11	6	7
Provincial/Territorial Deputy Ministers and Assistant Deputy Ministers	16	31	14	21
Regional Health Authorities	17	30	14	14
Provincial/Territorial Medical Associations/Societies	12	14	10	10
Health Sciences Centres and Hospitals	2	2	2	2
Medical Schools	2	2	1	1
Research and Funding Agencies	8	9	4	5
<b>Total</b>	<b>63</b>	<b>99</b>	<b>51</b>	<b>60</b>

\* Includes referrals, both to other individuals within the same category and to other individuals on the original list.

\*\* For some interviews there was more than one participant.

Overall, there were 14 (27.5%) interviews and 21 (35.0%) respondents from Provincial/Territorial Ministries of Health. Only two of these interviews were conducted with Deputy Ministers. The rest were designates of the Deputy Ministers and were typically fairly

senior officials (e.g., senior officials responsible for health human resources planning). There were also: 14 (27.5%) interviews and 14 (23.3%) respondents from Regional Health Authorities; 13 (25.5%) interviews and 13 (21.7%) respondents from a combination of Health Sciences Centres and Hospitals, Provincial/Territorial Medical Associations/Societies, and Medical Schools; and 10 (19.6%) interviews and 12 (20.0%) respondents from National Organizations and Research and Funding Agencies.

Table 2 presents the number of potential key informants initially identified, the number of individuals contacted, the number of interviews conducted and the total number of individuals interviewed, by geographic region. In terms of geographic distribution, 6 (11.8%) interviews and 7 (11.7%) respondents represented National Organizations. There were 9 (17.6%) interviews and 11 (18.3%) respondents from Atlantic Canada, 10 (19.6%) interviews and 13 (21.7%) respondents from Ontario and Québec,<sup>3</sup> 20 (39.2%) interviews and 23 (38.3%) respondents from Western Canada and 6 (11.8%) interviews and 6 (10.0%) respondents from the three territories.

**Table 2: Number of Interviews and Participants by Geographic Region**

<b>Geographic Region</b>	<b># of Individuals from Original List</b>	<b># of Individuals Contacted*</b>	<b># of Interviews Conducted</b>	<b># of Interview Participants**</b>
National	6	11	6	7
Atlantic Canada	12	22	9	11
Ontario/Québec	16	19	10	13
Western Canada	23	38	20	23
Territories	6	9	6	6
<b>Total</b>	63	99	51	60

\* Includes referrals, both to other individuals within the same category and to other individuals on the original list.  
\*\* For some interviews there was more than one participant.

For individuals who participated in the study, an average of 7.3 communications were required before an interview was scheduled. For individuals who did not participate in the study, an average of 5.5 communications were made before we knew that the individual was referring us to someone else or unwilling to participate.

Individuals who agreed to participate in the study were sent background materials and were asked to review them prior to the interview. These materials included: information regarding the development of the existing inventory; a list of models in the current inventory by geographic location; a list of models in the current inventory by type of service; and a list of the issues to be covered during the interview. During the interview, informants were asked to:

- Comment on the extent to which they felt the current inventory of models reflected new and innovative practices in their province and in the area of health care in which they work;
- Comment on the extent to which they felt that current innovations provide insights into how medicine will be practiced and funded in the future;

<sup>3</sup> Many of the representatives of the National Organizations were also from Ontario.

- Identify any other factors that they felt would have a substantial impact on how medicine is practiced and funded in the future;
- Identify any models which they were aware of which were similar to those that are already included in the inventory;
- Identify any models which they were aware of which they felt should be added to the inventory; and
- Identify any innovative international models of care that may be relevant to the Canadian context.

## 2.3 RESULTS

### 2.3.1 Familiarity with the Work of Task Force Two

People who were contacted regarding the current study generally appeared to be familiar with the work of Task Force Two and were more interested in participating than individuals who were contacted for the initial (i.e., Phase 1) study. It was, therefore, often easier and faster to arrange an interview with these individuals than it was in the first study. Even when potential respondents referred us to someone else, this latter individual was also often aware of Task Force Two.<sup>4</sup>

### 2.3.2 Satisfaction with the Methods Used

In order for the respondents to be able to comment on the current inventory of models, it was necessary to ensure that they had some familiarity with it. The web version of the existing database (i.e., inventory) was not available and the paper version is quite lengthy. In an effort to control the amount of material respondents were asked to review, a decision was made to send only some fields from each model description to respondents in paper form.<sup>5</sup> These fields were:

- The title of the model;
- The name of the organization which was using/operating the model;
- The purpose/rationale for the model;
- The geographic location(s) of the model; and
- The service area(s) covered by the model.

This information did not appear to be sufficient for some respondents. Comments included:<sup>6</sup>

- “The descriptions don’t really give me any idea whether the model was good or successful.”
- “What level of detail is provided in the database? The description doesn’t tell you anything.”

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<sup>4</sup> In the first study, we generally needed to describe the roles and objectives of Task Force Two to each potential participant.

<sup>5</sup> The complete description of all models in the inventory covers approximately 700 pages. Although the amount of material respondents were sent was limited, they were still sent 57 pages to review prior to the interview.

<sup>6</sup> The comments provided in this chapter are based on respondents’ feedback and may not actually reflect the nature of the inventory.

### **2.3.3 Satisfaction with the Concept of an Inventory of Models**

One of the key findings of this phase of the study was that there is considerable interest in the inventory. While the inventory was originally developed as a tool for Task Force Two to try to identify future trends in human resources issues for physicians, respondents clearly saw the inventory as a significant resource for themselves and the organizations they represented. This has important implications for the future of the inventory and will be discussed later in this report. Comments included the following:

- “The inventory is a great idea.”
- “Models are good and provide some insight.”
- “(The inventory) was helpful and applicable.”
- “(The inventory) provided a fair amount of insight into future patterns.”
- “If you are planning to look at a type of model, (the inventory) can be a useful tool to find out if someone else has tried something comparable.”
- “(The inventory) may provide some ‘learning opportunities’ down the line.”
- “When and how will the full database inventory be available?”
- “Some of the things on the inventory were intriguing. It would be helpful to see more information or have access to the database to fully assess how much insight the inventory provides.”
- “There have been lots of models, plans and databases developed in the past. What will be done with this information, how will it be used, and what will Task Force Two produce as an end product?”

### **2.3.4 Satisfaction with the Representativeness of the Current Inventory**

Respondents were asked how well the existing inventory reflected new and innovative practices in their province and in their area of health care. Overall, there was fairly good support for the inventory as 59.6% of those who responded stated that they felt the inventory reflected new and innovative practices in their province and 66.7% felt it reflected the area of health care in which the respondent worked. Typical comments included:

- “(The inventory) seems to be a reasonable mix. It covers a lot of what is going on.”
- “(The inventory) seems to reasonably comprehensive and up-to-date.”
- “(The inventory) reflects fairly well the use of collaborative practices across Canada.”
- “(The inventory) seems to be fairly representative of some of the physician funding models.”

A number of respondents were only somewhat supportive of the inventory but this often had to do with not having enough information as it had not been possible to provide electronic access to the full text of the models in the inventory (see comments in Section 2.3.2).

Overall, 14.8% of respondents had negative comments about the inventory. Many of these respondents felt the inventory did not fully reflect the range of models in their province or expressed other types of dissatisfaction with the inventory. Examples of such comments were:

- “(The inventory) moderately reflects innovation but basically it is an inventory of working relationships. It was more just examples of applications in other provinces.”
- “Some of the things are helpful but not particularly innovative.”
- “The inventory is a mixed bag of theoretical and functioning models with a lot of variance.”
- “There is too much disparity in the inventory. There should be some better criteria to become part of the inventory.”
- “It would be good to separate the actual models from the other stuff (e.g., models based on the literature).”

Other negative comments appeared to reflect frustration that the inventory fell short of some ideal notion about what such an inventory should be, and/or about the fact that it was representative but not exhaustive. In addition, some comments did not seem to reflect the full range of models which actually exist in the inventory. Examples of comments were:

- “The inventory has identified a number of areas applicable to physician practices but it may just be the tip of the iceberg.”
- “The inventory in general seems to reflect admin/hospital related areas of innovations. What it does not reflect well is innovations in private practices.”
- “There are examples of things occurring on a micro level but (the inventory) does not reflect more important activity at the macro level.”
- “In general, it seems that the models are implementing stop gap measures to physician shortages and do not address the core underlying issues of the existing shortage.”
- “The models are primarily focused on provider focused care rather than patient focused care.”
- “All the projects/models cited seem to be generated from institutions and government. There were very few provider generated models identified. The top down models are not flexible enough at the local level. It would be good to find examples of innovative practice models developed and delivered by the providers.”
- “Cost containment seems to be the most important issue in the majority of models and projects identified. Where does innovation in quality and patient care come in?”

While there were some negative comments about the inventory, most of those who responded stated that it represented a good range of existing models. Respondents from Provincial/Territorial Medical Associations/Societies, Medical Schools and Health Sciences Centres and Hospitals were by far the most positive: 100% of those who responded felt the inventory represented the area of health care in which they work and 84.6% felt the inventory reflected innovative practices in their province. In contrast, only 40.0% of government respondents (i.e., representatives of Provincial/Territorial Ministries of Health and Regional Health Authorities) felt the inventory represented the area of health care in which they work and 25.0% felt the inventory reflected innovative practices in their province. These findings may reflect the fact that respondents were asked to focus on their geographic location and the area in which they work when reviewing the list of models. Thus, government respondents in particular may have been aware of models in their own province which were not included in the inventory, although similar models were included for other jurisdictions. In addition, some of the

government respondents may have been looking for models focusing on the big picture rather than models which were reflective of issues at a more local level.

Several respondents also noted that having evaluation information on the various models was critical for understanding the importance of the models. The respondents noted the lack of evaluation, but this may, at least in part, be because they had not seen the full model descriptions (which include a discussion of any evaluation which was conducted on a given model).

Comments included:

- “There needs to be evaluation or something to prove the models have worked and/or that they make a difference.”
- “Many of the models have not been evaluated and it is difficult to assess the impact of these models on future medical care delivery and funding.”
- “The models need a more qualitative assessment, in particular, regarding whether they are successful and sustainable.”
- “One problem is that the descriptions appear to be written by a proponent and can sound good but they have vested interests and the models, in general, offer no objective analysis or evaluation.”<sup>7</sup>
- “There is no cost-effectiveness analysis or evaluations of most of the initiatives/models listed. There are also questions if these models will come to fruition.”
- “Will there be any efforts by Task Force Two to evaluate or comment on the success or failure of projects?”
- “How will models be evaluated?”

The majority of those who responded (66.0%) did not provide any information regarding innovative international models. Of those who did, the following examples were provided:

- Health Maintenance Organizations and managed care in the US;
- Health care in Australia, particularly for rural areas;
- Use of collaborative practices in the UK;
- Organization of health care teams in Scandinavia;
- Primary care trusts in the UK; and
- Use of electronic health records in the UK.

It is noted that some respondents questioned the potential applicability of international models to the Canadian context. These respondents observed that a lot of time, effort and energy could be spent documenting a literature that is quite extensive but that political, cultural and other constraints may make it difficult to apply the models to Canada.

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<sup>7</sup> The descriptions of the models were not written by proponents. However, each model was discussed with, and the written description was approved by, an individual(s) who was very familiar with the model (and was presumably a proponent of the model). The inventory includes information regarding any evaluation work that had been done on a model.

### **2.3.5 Maintaining the Inventory**

The inventory was initially compiled through a review of literature, reports, and commission studies as well as through telephone interviews with key individuals in the health care field. The researchers used a “snowball technique” to identify key informants who were knowledgeable about the specific models of interest. In the year or so since the initial inventory was finalized, a number of changes appear to have occurred. These changes, for models in the original inventory, include:

- Two or more separate models have been integrated into one model (e.g., all physicians in an area are working under the same funding arrangement rather than under two or three different arrangements);
- Models have been discontinued (e.g., because of a lack of funding);
- Models have been expanded (e.g., the number of sites in which the model operates has been increased or the variety of health professionals involved in the provision of care delivery has increased); and
- Models have evolved into a new model/approach.

Respondents cautioned that in order to be useful, the inventory would need to be maintained. Several respondents wanted to know how the inventory would be maintained and kept current. Comments included:

- “The inventory of models will change over time. It is a good starting point, but only valuable if it is kept current.”
- “This is an area which is changing rapidly and it is hard to keep abreast with all the pilot projects occurring.”
- “It seems that a lot of models being developed are an outcome of the Ministry’s ‘flavour of the year’.”
- “It would be good to have a summary report of models and where they stand today.”
- “How will the inventory be maintained and kept current?”

As noted earlier, making adjustments to the original inventory was not within the terms of reference for this project.

### **2.3.6 Factors That Will Impact on How Medicine is Practiced and/or Funded in the Future**

Respondents were asked to comment on the extent to which they felt that current innovations provided insights into future patterns of how medicine will be practiced and funded. Approximately half (52.2%) of respondents indicated that they felt the innovations were generally insightful. A further 41.3% indicated they thought the innovations were moderately insightful. As most respondents appeared to answer this question based on the list of models in the existing inventory, these findings may again reflect how well respondents felt the inventory matched their notion of what the inventory should contain. Comments included:

- “A lot of the projects/models appear to be developed in response to major problems. They are reactive in nature versus proactive and focused on improving the health care system.”
- “(The inventory) seems to reflect where things are headed, in particular, the use of collaborative teams and changing remuneration mechanisms. They seem to be consistent with the direction of the federal government and many provinces.”

Respondents were also asked to identify factors they believe will impact on how medicine is practiced and/or funded in the future. Several factors were identified including:

- Supply and demand – The demand for physicians will be substantially higher than what medical schools will be able to provide. One respondent noted that “The same pool of physicians is being sought after internationally. Public policy seems to drive where physicians will relocate.”
- Changing practice profiles - The practice profiles of new physicians are and will continue to be quite different from that of retiring physicians (e.g., new physicians often put more limits on the number of hours they work [including on call hours], and on the number of patients they see). Therefore, it will require more resources to replace retiring physicians. One respondent noted that “As the work force ages it may take potentially three to four physicians to replace one.” In addition, physicians are no longer willing to do “everything for everybody”. As a result, some areas of care are becoming lost, and gaps in the delivery system are starting to occur. There are more women entering the profession. There is a new generation of physicians who may be more amenable to innovation.
- Expectations and lifestyle choices of new physicians – Issues such as contracts, designated work hours, remuneration and benefits (e.g., maternity leave, sick leave) will be of more importance. One respondent noted that “Things that had previously been considered an ‘assumed professional function’ in many cases is now a ‘contracted arrangement’.” With the increased use of contracts, there will be more of a push to ensure the productivity of physicians. One respondent noted that “As Family Practitioners become more involved in sessional and salaried positions, there is a risk that they will develop an ‘employee’ as opposed to a ‘professional’ mentality.”

- Remuneration – It was noted that how physicians are funded will have a big impact on how many physicians will be required, where physicians practice, and how other health care providers (e.g., nurse practitioners and midwives) are used. One respondent noted that “Current fee-for-service schedules may not adequately remunerate for more complicated patient care. This may act as a disincentive for physicians to participate in multi-disciplinary teams in which physician activities are primarily focused on providing the more complicated and time intensive care.” It was also noted that remuneration agreements in one province may have an impact on other provinces.
- Relationships with other care providers – The development and education of interdisciplinary teams is considered essential for assisting/supporting physicians, although it was noted that it may take several years for the benefits of this approach to be realized. It was noted that the move toward using other health care providers to support physicians may also be limited. For example, one respondent noted that the “distribution, recruitment and retention issues we face with GPs [general practitioners] will be the same for NPs [nurse practitioners].”
- Information Technology<sup>8</sup> – Information technology will have a big impact on the practice of medicine particularly in facilitating collaborative practice among health professionals. One respondent noted that “It will become more of an ‘enabler for collaborative practice’.” Telehealth will be particularly important for rural areas as it will remove barriers to access in underserved areas, enable access to specialty care, and keep people at home. It was also noted that future data may be less accurate and/or complete for physicians paid on a salaried or sessional basis unless there is active “shadow billing” to provide data on individuals seen by physicians who are remunerated by methods other than fee-for-service billings.
- Formal linkages between physician services and management in regional health authorities and districts – Physicians want to be involved in bargaining with provinces and regions regarding fees, funding, and so on. This will have substantial consequences for the provision of hospital and other health care services. New physicians will want and need to be involved in systems reform.
- Provider involvement in planning – Health care providers at the community level need to be more involved in planning and finding ways to save money while still improving or maintaining quality care. One respondent noted that “There is very little sense that local people, communities, patients and providers have meaningful involvement in implementing programs. Normally there are so many limitations and a lack of flexibility in ‘innovative’ projects developed by institutions and government.”
- Consumer/patient activism – Patient expectations may affect the way care is delivered, particularly for individuals with chronic diseases. It was noted that patients are still somewhat satisfied, but as the system deteriorates further, they will become less satisfied.

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<sup>8</sup> Information technology refers to the use of technology to gather information from a variety of sources and to use it for a variety of purposes. It includes, but is not limited to, telehealth and electronic health records.



## 3. IDENTIFICATION OF NEW MODELS

### **3.1 OVERVIEW**

As noted previously, one of the objectives of the current project is to ensure that the inventory of models was reflective of the full range of new and emerging models in Canada. Thus, as part of the validation phase, respondents were asked to identify models which they felt were similar to those already included in the inventory as well as models which they felt were new and should potentially be added to the inventory. Overall, some 75% of respondents identified one or more models which were similar to the models noted in the inventory while 39% of respondents identified one or more new models. Respondents were also asked to provide contact information for each of the models they mentioned.

The respondents in the validation phase identified a total of 71 models which they felt were similar to models that were already included in the inventory, and 74 models which they felt were new and should be considered for inclusion. In addition, 15 international models/programs/approaches were identified. However, most were already well known models such as Health Maintenance Organizations in the United States. Some respondents also questioned the extent to which models from other countries could be adapted to Canada. Thus, international models were not included in this study.

All of the new models identified by the respondents in the validation phase of the study were reviewed by the researchers and the Project Working Group. In some cases, models identified as similar to those in the existing inventory were considered different enough to potentially be included. In other cases, models identified as new were considered to be similar to models already in the inventory.

A total of 27 additions to the inventory were identified.<sup>9</sup> The new models were selected based on the criteria used to develop the original inventory (e.g., they have substantial physician involvement and/or impact). Overall, the new models appear to be different from models in the existing inventory and/or they address one or more of the factors that respondents from the validation phase felt would have a substantial impact on how medicine is practised and funded in the future.

The models are presented in a separate document entitled *Validating the Range and Scope of New Models for the Delivery of Medical Services. Volume 2: Inventory of Narratives*.

### **3.2 THE CATEGORIZATION OF NEW MODELS**

There seemed, overall, to be a clear and qualitative difference in the models documented in this project compared to the original project conducted in Phase 1. Most of the models in the earlier study focused on innovative methods to provide care services, *per se*. In contrast, the models in this study seemed to focus on integrating or coordinating the provision of care, or expanding the scope of activities from the provision of care to education and training or other related activities. Thus, a new category of Care Facilitation/Coordination was added to our list of types of health services. Even when models focused more directly on care provision, there were often still some coordination type aspects. For example, the Group Physician Practice (model 163) and the Group Health Centre (model 178), both of which are in Ontario, have a much broader range of services than most previous models of primary health care. In addition, the Centralized Intake Model for Children's Mental Health (model 170) in Alberta streamlines access to care services for children with mental health needs through centralized intake and priority setting. In contrast, most of the models for mental health in the Phase 1 study focused on shared care models in which psychiatrists work with general practitioners to help them manage the mental health needs of their clients.

Table 3 provides a breakdown of the geographic distribution of the 27 new models of care documented in this study, and the 154 models documented in the earlier Phase 1 study. The highest number of new models (9) were located in Ontario, followed by Alberta with four models and Manitoba and Québec with 3 models each. Overall, considering all 181 models, the six jurisdictions with the highest number of models were Ontario (41), National (27), Alberta (26), Québec (14), Manitoba (12) and Nova Scotia (12).

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<sup>9</sup> The researchers had been contracted to add 25 new models to the inventory.

**Table 3: Geographic Distribution of the Models of Care**

	<b>Original Models</b>	<b>New Models</b>	<b>Total Models</b>	<b>Percent of Total Models</b>
Yukon	1	1	2	1.1
Nunavut	0	1	1	0.6
Northwest Territories	5	0	5	2.8
British Columbia	6	2	8	4.4
Alberta	22	4	26	14.4
Saskatchewan	9	1	10	5.5
Manitoba	9	3	12	6.6
Ontario	32	9	41	22.7
Québec	11	3	14	7.7
New Brunswick	11	1	12	6.6
Nova Scotia	8	0	8	4.4
Prince Edward Island	4	0	4	2.2
Newfoundland	9	2	11	6.1
National	27	0	27	14.9
<b>Total</b>	<b>154</b>	<b>27</b>	<b>181</b>	<b>100.0</b>

Table 4 provides a breakdown, by type of care model, for the 27 new models. There were four new models on Primary Health Care. They included: a group practice in Ontario which provides a wide range of services to a small rural community (model 163); a primary care model in which a group of physicians provide care on a visiting basis to 23 remote First Nations communities, also in Ontario (model 164); a model of primary care for under-served areas in New Brunswick (model 176); and a well-established, nationally recognized program regarding the delivery of a broad range of services in Ontario (model 178). In addition to these models, there were three broad strategic initiatives/frameworks for developing new and innovative models for the delivery of primary health care at a provincial level. These models are included in the Care Facilitation/Coordination section and are discussed in more detail below.

**Table 4: Distribution of Models by Type of Health Service**

	Original Models	New Models	Total Models	Percent of Total Models
Primary Health Care	35	4	39	21.5
Hospitals	21	0	21	11.6
Continuing Care	12	0	12	6.6
Mental Health	12	3	15	8.3
Public/Population Health (includes Training and Education)	8	0	8	4.4
Mixed/Integrated Care	8	2	10	5.5
Other Health Services	11	0	11	6.1
e-Health	9	2	11	6.1
Care Facilitation/Coordination	0	9	9	5.0
Funding*	38	7	45	24.9
<b>Total</b>	<b>154</b>	<b>27</b>	<b>181</b>	<b>100.0</b>

\* Narratives which included descriptions of both funding and care delivery were included in the counts of the types of care models. Thus, the total in this row is for narratives on funding *per se*.

There were two models on telehealth for rural areas in Ontario and the Yukon that included videoconferencing for care provision, medical consultation and professional training (models 155 and 177, respectively). There were two new models on the integration of a range of care services. These were the coordination of a broad range of health and social services in Manitoba (model 166) and the newly developed Local Networks for Health and Social Services in Quebec (model 181). There were three new models related to Mental Health. These included a psychiatric outreach service to rural areas in Ontario (model 165), a centralized intake model for children’s mental health in Alberta (model 170), and an early psychosis treatment program for persons presenting with their first episode of psychosis, also in Alberta (model 179).

There were seven new models related to funding. These included a model for contracted specialists in Nunavut (model 160), an incentive system to establish full service family practice care in British Columbia (model 161), a case payment model for oncology services in Newfoundland and Labrador (model 162), and a Alberta model in which physician remuneration is developed through a tri-partite process involving physicians, Regional Health Authorities and the provincial government (model 172). In Saskatchewan, a model was developed to provide a province-wide standardized method for reimbursing non fee-for-service physicians (model 173). Finally, there were two models for Ontario, one for paying specialists working in rural and remote areas (model 169) and an alternative funding plan for academic physicians (model 175).

The largest number of new models (9) was categorized into the Care Facilitation/Coordination category. It was noted earlier that one of the criticisms of the models documented in the Phase 1 study was that there were no broader or “macro” type models. Three of the new models describe the development of broad, comprehensive frameworks developed at the provincial level to fund a number of new primary health care services. These services are funded by the province, using, at least in part, funds from Health Canada’s Primary Health Care Transition Fund and are primarily delivered through Regional Health Authorities or Regional Health Boards. We have documented

such provincial frameworks for British Columbia (model 168), Alberta (model 167), and Newfoundland and Labrador (model 171).

There were two models in this category for Ontario. The first model is the Cardiac Care Network, which is an advisory body to the Ontario Ministry of Health and Long-Term Care. The Cardiac Care Network works to ensure more equitable and timely care, across the province, for cardiac care (model 156). The other model in Ontario is a Visiting Specialist Program for small and remote communities that cannot support their own specialist(s). The visiting specialists also provide training to local physicians. Thus, their focus is broader than just care provision and they serve a broader function as a community resource (model 157).

Manitoba also had two models in this category. The first is a service in which oncologists work with general practitioners and other providers to facilitate better and more integrated care to cancer patients (model 158). The second model is a health information and referral service which provides information 24/7 and directs callers to appropriate resources, in their own communities, who can assist them with their care needs (model 159).

Finally, Québec also had two models in this category. The first is a hospital-based regional ambulatory care center that is involved in the functional integration of a wide range of health and social services in the hospital/ambulatory clinic and in the community (model 174). The second model is actually new legislation, generally referred to as Law 90, An Act to Amend the Provincial Code and Other Legislative Provisions as Regards the Health Sector (model 180). This new Act updates and re-structures the powers and professional scopes of practice of 11 health professions. The purpose of the law is to provide a legislative framework, and context, for greater inter-professional collaboration among professional health care providers.

### **3.3 THE RELEVANCE OF THE MODELS FOR PHYSICIAN HEALTH HUMAN RESOURCES**

The inventory noted above contains a mixture of models. These models can be categorized in a variety of ways which can assist one's thinking about developing a human resource strategy. Table 5 presents a list of the types of models included in the inventory and their relevance for issues which have been identified as having an impact on the way medicine is practised and/or funded currently and in the future.

**Table 5: Types of Models and Relevance for a Physician Human Resource Strategy**

Type of Model	Relevance for Physician Human Resource Strategy
Care Delivery	<ul style="list-style-type: none"> <li>changing practices in health services delivery for both general practitioners and specialists in different care settings and in different geographic locations</li> <li>examples of the way the practice of medicine is changing (e.g., through shared care, collaborative teams, and group practice)</li> <li>examples of how health care delivery is changing and its impact on physicians (care integration/coordination, focusing on both care and training, particularly in rural areas).</li> </ul>
Funding/Remuneration	<ul style="list-style-type: none"> <li>ways to address funding/remuneration issues</li> <li>ways to address recruitment issues</li> <li>ways to address retention issues</li> <li>ways to address issues related to changing lifestyles and expectations</li> </ul>
Education/Training	<ul style="list-style-type: none"> <li>ways to affect the supply of general practitioners and/or specialists</li> <li>ways to affect retention issues</li> <li>ways to address shortages of general practitioners in rural and remote areas</li> </ul>
Practice Guidelines	<ul style="list-style-type: none"> <li>ways to affect evidence based practice</li> </ul>

### 3.4 LIMITATIONS OF THE INVENTORY

The inventory constitutes a reasonably broad selection of models across Canada and includes concrete examples of the different factors that are thought to have an impact on the way medicine is practiced and funded now, and how it may be practiced and funded in the future. However, the inventory also has several limitations.

First, the models included in the inventory existed at two particular points in time. In both the Phase 1 study and the current study, efforts were made to ensure that the information pertaining to each model was as complete and accurate as possible before the model was added to the inventory.<sup>10</sup> As noted earlier, however, models change over time. They may be discontinued, may expand, may develop into something else, and so on. In addition, there may be some models which are not currently included in the inventory but which may have an impact on physician human resources in the future. Nevertheless, the inventory provides examples of how factors affecting physician human resources in Canada have been addressed at *specific* points in time.

Second, the inventory includes models from all provinces and territories and from a wide variety of organizations in Canada. However, if similar models appeared to be in operation in different jurisdictions or different settings, they were not necessarily added to the inventory (recall that the inventory was meant to be comprehensive not exhaustive). Thus, the models in the inventory should be considered as *examples* of what is occurring in Canada, not as the only issues being addressed in a particular jurisdiction or type of organization. In some cases, the inventory may include the only example of an approach in Canada. In other cases, the inventory may include one or two (but not all) examples of an approach across Canada.

<sup>10</sup> This was done by obtaining written information in addition to interviewing key stakeholders (where appropriate) and having respondents review the model narratives before they were added to the inventory.

Third, while the inventory appears to be quite comprehensive, some of the respondents in the current study felt that it could be improved. The type(s) of improvement suggested appeared to depend on respondents' views of what an ideal inventory should contain. Thus, while we feel that the existing inventory can assist in developing a physician human resource strategy, we also note that additional examples of models could be added at the discretion of Task Force Two.

Fourth, in the Phase 1 study, Task Force Two was interested in identifying relevant international models. However, in the current study, only a small number of respondents provided suggestions for international models. Some of these respondents also cautioned that the relevance of international models for Canada may be limited. Thus, while we feel that the existing inventory is a good representation of Canadian service delivery and funding/remuneration models, we recognize that Task Force Two may still wish to look at international models in more detail, as appropriate.



## 4. DISCUSSION

### **4.1 INTRODUCTION**

As noted earlier, the current study is the second of two studies focusing on the development of an inventory of innovative, new, emerging and/or existing models of service delivery and/or funding/remuneration in Canada. The inventory was created and validated in order to serve as one of several tools Task Force Two can use in developing a long term human resource strategy for physicians that is sensitive to Canada's provincial and territorial realities. Prior to the development of the inventory, there had been no national resource that provided a summary of service delivery and/or funding/remuneration models that have a substantial impact on physician human resources.

In this chapter, we integrate the findings from the two studies, discuss the inventory as a whole and provide recommendations for Task Force Two regarding the key findings.

### **4.2 FACTORS WHICH MAY AFFECT THE FUTURE PRACTICE OF PHYSICIANS**

In both the Phase 1 study and the current study, we asked respondents to assist us in identifying factors which they felt currently had, or could have, an impact on the way medicine is practiced and/or funded. Some of the factors identified in the Phase 1 study overlapped with some of the factors identified in the current study. However, when the factors from both studies are combined, there appear to be seven key factors which may have an impact on physician human resources in the future. These are:

- **Supply and Demand** – Given changes in the practice profiles of physicians (see below) it is anticipated that there will be a substantial demand for physicians in the future. This will be true across Canada, but will be particularly important for rural and remote areas. This is being addressed in several ways. First, there is an effort to use existing resources differently. This has resulted in group practices, shared care, multidisciplinary collaborative teams, and the use of other health professionals (especially nurses) to

reduce the demand on physician time but also to enable physicians to use their skills more effectively. Second, there is a move towards preparing family practitioners better to practice in rural and remote areas. This has included on-site training opportunities for residents, telehealth opportunities (particularly between specialists in an urban area and family practitioners in a rural/remote area), and recruitment and retention incentives. Third, there is a move towards using international medical graduates to fill vacant positions, especially in rural and remote areas.

- **Changing Practice Profiles** – The practice profiles of new physicians are and will continue to be different from that of retiring physicians. For example, new physicians are putting limits on the number of hours they wish to work, the number of patients they see, and the types of patients they see. In addition, contracts, designated work hours, remuneration and benefits (e.g., maternity leave and sick leave) are becoming more important. This will have several important consequences. First, more resources will be required to replace retiring physicians (thus placing more pressure on an already limited supply of new physicians). Second, some areas of care, and some types of patients, may become lost, creating gaps in the delivery system as well as a need for ways to fill the gaps (e.g., through the use of hospitalists, midwives or other types of health professionals). Third, it is thought that at least in some contexts, physicians may be developing an “employee” as opposed to a “professional” mentality.
- **Working in Collaborative Teams** – There appears to be an increase in the use of multidisciplinary collaborative teams. While the use of collaborative teams is a key aspect of primary care models, collaborative teams are being used in other settings as well. The use of collaborative teams has several implications for physicians. First, the use of a team approach means that the workload of each team member may be reduced (and thus the approach may reduce some of the demand for physician time) but it also means that each team member can use his/her professional and personal skills more efficiently. However, there needs to be more training on how to work effectively on collaborative teams. Some of the models in this study show that physicians are expanding their roles from care delivery to training and teaching in a collaborative environment. Second, concerns about potential physician liability issues may affect the extent to which, and the context within which, collaborative teams are used. Third, there needs to be more acceptance of collaborative teams. Not all physicians are comfortable in working in team settings and further education may be required. Fourth, structure and payment mechanisms need to be supportive of collaborative teams. There are generally few, if any, provisions for payment for teaching, giving advice, attending meetings, being involved in community consultations and so on, in a fee-for-service payment system. It may take several years for both the benefits and the limitations of working in multidisciplinary collaborative teams to be realized.
- **Information Technology** – Telehealth technology is currently being used in a variety of settings for a range of purposes. For example, the technology is being used for physician training purposes, to enable specialists and family physicians to work together in providing care, to enable patients to self-administer some assessment measures and send the results to physicians (and other health care professionals) for review, and to link

patients and health care providers with family members when patients receive care outside of their communities. Information technology will continue to have a big impact on the practice of medicine, particularly as it is used to develop electronic health records. The use of information technology by patients may mean that individuals become more knowledgeable about their own health care and the health care system which, in turn, may affect the demand for health care services. Thus, the use of information technology may have several impacts on the practice of medicine: it may reduce the demand on physicians' time, encourage shared care and collaborative practice, improve patient care and result in more knowledgeable patients.

- Evidence-Based Practice – There appears to be a growing recognition of the importance of evidence-based practice. For example, practice guidelines have been developed in some areas (e.g., the prescribing of antibiotics). The development and use of practice guidelines have the potential to use limited resources (including physicians) more effectively as well as to improve patient care (particularly for those with chronic conditions).<sup>11</sup> In addition, although many of the models in the inventory have not been evaluated to any great extent, there is increasing recognition that evaluation is an important component for new initiatives. Evaluation is being seen as a tool which can assist in determining which programs and services are having the intended impacts, which are cost-effective and so on. The use of practice guidelines, evaluation and similar tools will enable providers and funders of health care services to be more accountable to patients, professional organizations, and government.
- Remuneration – How physicians are remunerated will have a substantial impact on physician supply and demand as well as the extent to which other health care providers are used (and ultimately, on the supply and demand for these other providers, particularly nurses and nurse practitioners). While a fee-for-service approach remains prominent in Canada, alternative payment approaches may be more optimal models for physicians working in academic health sciences centres or in rural and remote areas. In fact, some geographic areas (such as Newfoundland and the Northwest Territories) rely heavily on the use of alternative payment plans. Individual provincial/territorial remuneration agreements will have a substantial impact on other provinces.
- Physician Involvement in Planning – Physicians are becoming more involved in bargaining with provinces and health regions regarding fees, funding, and so on. This will have consequences for the provision of both community-based and hospital-based services, particularly as physicians become more involved in the development and implementation of new initiatives.

In addition, the current study identified two key trends which will need to be monitored in the future. These are:

- Primary Care Initiatives – There appears to be a growing interest in developing comprehensive primary care frameworks in several provinces. In some cases, these

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<sup>11</sup> Patient expectations may have a substantial impact on the development and use of practice guidelines.

appear to be an extension of initiatives that were developed using funding from Health Canada's original Health Transition Fund. The development of the frameworks have often involved discussions with multiple stakeholders, including representatives of Medical Associations, Regional Health Authorities and the provincial government. The initiatives generally focus on both care delivery and funding/remuneration issues. In addition, there appears to be an opportunity for the development and implementation of many new models at the regional and local levels as well as a recognition of the importance of evaluating these models. While these primary care initiatives are commendable, it is recognized that there may be an imbalance of innovations across the full spectrum of health services if only one area receives funding for innovations.

- **Physician Involvement in Systems Reforms** – As noted earlier, there is a growing trend towards physicians wanting to be, and becoming, more involved in discussions with other stakeholders regarding the delivery and funding of health services (this includes the development of new initiatives). The new models of care focus on reform/change/improvement at the broader level (such as tri-partite arrangements between physicians, Regional Health Authorities and Ministers of Health), and providing advice to improve services at a province-wide level (e.g., the Cardiac Care Network). The new models also focus on operational issues designed to improve services such as teaching, community consultations, and collaborative practice and on working in contexts where a wider range of health and social services are combined than has been the case in the past.

**RECOMMENDATION 1:** Use the current inventory of models (which includes models from both Phases 1 and 2) as one of several tools in developing their physician human resource strategy.

### **4.3 ISSUES RELATED TO EVALUATION AND INNOVATION**

Several of the respondents in the current study commented on the importance of evaluating new and innovative models in order to determine their overall importance, specific strengths and weaknesses, sustainability in the long term, applicability to other settings, and similar factors. The issue of evaluation has also been raised by Task Force Two. There appear to be at least three aspects to the issue of evaluation. These are examined in the following sections.

#### **4.3.1 The Evaluation of Models in the Existing Inventory**

As part of developing the descriptions of all the models in the existing inventory, we asked respondents to indicate whether an evaluation had been done, and if so, what it had involved.<sup>12</sup> While some models had been evaluated, many of them had not. Even when evaluations had been conducted, they were often small, informal, and primarily qualitative in nature. The length of time a model had been operating was not necessarily related to whether it had been evaluated. Models which had been funded through Health Canada's Health Transition Fund often (but not always) included an evaluation.

<sup>12</sup> When model descriptions were based on written documentation only, we specifically looked for information to determine whether an evaluation of the model had been conducted.

The availability of an evaluation is not necessarily sufficient to determine whether the model will be sustained. Having an evaluation allows one to provide commentary on the current status of a model and potentially to identify areas where improvements could be made. However, there are examples of innovative models which, despite good evaluations, have been discontinued.<sup>13</sup> There are also examples of models with little or no evaluation, and/or less than positive evaluations, continuing to operate.

One of the issues for Task Force Two is to determine which models in the inventory have the potential to contribute substantially to the development of a physician human resources strategy. Once the models have been identified, Task Force Two may wish to determine the extent to which the models have been evaluated and consider providing funding for conducting evaluations if these have not been carried out. The identification of relevant models would need to be done carefully as a number of issues could be raised regarding the identification process. As well, the evaluation of the models would need to involve key stakeholders in the planning and implementation of the evaluations in an effort to maximize cooperation.

#### ***4.3.2 Recognizing the Importance of Evaluation for New Initiatives***

Many of the models in the existing inventory may not have been evaluated to any extent because the developers, funders, and/or proponents of the models may not have recognized the importance of evaluation for determining what was working and what was not. Many of the models in the inventory are responses to local needs within a given organization. Thus, the innovation may have been developed and adopted within an organization. While the model may be seen to be (and may indeed be) useful, there may not be a perceived need for more formal evaluation. Even if an organization does recognize that an evaluation would be useful, there may be no funding available to conduct an evaluation.

#### ***4.3.3 The Use of Evaluation as a Method for Determining the Importance of a Model***

As noted by some of the respondents in this study as well as members of Task Force Two, it is important to be able to determine which models in the inventory are very good, which are not as good, which have the potential to be sustainable in the long term, which are applicable to other geographic locations, and so on. In order to evaluate a model, one must have:

- a clear understanding of what the goal of the model is;
- the necessary skills to conduct an informative evaluation; and
- funding to carry out the evaluation.

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<sup>13</sup> One example is SIPA (*Système de services intégrés pour personnes âgées en perte d'autonomie*), a model which was developed and implemented in Quebec between 1995 and 2002. This model was not included in the inventory in Phase 1 because it had been discontinued. However, several respondents in Phase 2 suggested that it should be added to the inventory. We thought this was because the model was considered to be important but also recognized that the respondents may not have been aware that it had been discontinued.

Most of the models in the inventory have a clearly identified purpose. However, the anticipated impact on physicians and/or health care teams is not always clearly articulated. While the actual impact of a model on physicians and other health care providers could be examined as part of an evaluation, it is important to know what one is aiming for.

It is expected that while some organizations may have the in-house capability to conduct evaluations (e.g., may have skilled personnel, computers, and so on), others may not.<sup>14</sup> Information regarding the conduct of evaluations can be obtained from a variety of sources, including textbooks on evaluation. Tools can be developed to assist individuals in identifying relevant questions to ask. Individuals with experience in conducting evaluations can be identified. Thus, obtaining the necessary skills to conduct an informative evaluation is not an insurmountable task. What appears to be more challenging, however, is obtaining sufficient funding to conduct informative evaluations.

Health Canada's original Primary Healthcare Transition Fund provided a mechanism to fund the conduct and evaluation of new innovations. While initiatives such as the Primary Healthcare Transition Fund are helpful, they are time limited. At the current time, there does not appear to be a national resource which will support the development, implementation and evaluation of new and innovative models of care delivery and funding. In some cases, the necessary resources may be available at a provincial, regional or local level (e.g., as with the Primary Care Initiative in Alberta), but again, the resources are limited. While it may be possible to develop partnerships with researchers or research funding organizations, the interests of academically based researchers may not mesh well with the needs of developers, funders, and proponents of new and innovative models in more applied settings.

**RECOMMENDATION 2:** Recommend that funding for the development and evaluation of new and innovative health service delivery and/or funding/remuneration models should be available on an ongoing basis.<sup>15</sup> This funding should be extended to the development and evaluation of clinical practices for key health professions such as physicians.

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<sup>14</sup> Even when the necessary resources exist in-house, issues regarding the objectivity of an evaluation conducted by in-house personnel may arise.

<sup>15</sup> This funding could be available from federal organizations (such as Health Canada or the Canadian Institutes for Health Research), from provincial organizations (such as Ministries of Health or Medical Associations), from regional health authorities, from more locally based organizations such as hospitals or from a combination of organizations. The key point here is that evaluation should be considered a critical component of the development and implementation of new initiatives and should be supported with sufficient resources.

#### 4.4 THE FUTURE OF THE INVENTORY

Respondents in both the Phase 1 study and the current study expressed an interest in the inventory.<sup>16</sup> For the most part, respondents in the validation component of the current study saw it as a potentially useful resource for themselves and their organizations. Although the inventory was developed for use by Task Force Two, it is heartening to know that it has been seen by representatives of national organizations, Ministries of Health, Medical Associations, and so on, as having wider applicability. If the existing inventory (or a modification of it) were to be made more widely available, several steps would need to be taken to ensure that its contents were relevant to the target user groups.

First, the purpose of the inventory would need to be clearly defined. The current inventory was intended to provide a broad range of models specifically for use by Task Force Two for the development of a physician human resources strategy. A more widely available inventory would likely have a substantially different purpose.

Second, the target user group(s) would need to be articulated. What is appropriate for the development of a physician human resources strategy by Task Force Two may have little relevance for a research organization trying to determine if a proposed initiative should receive funding. Similarly, what may be useful for representatives of a provincial/territorial Ministry of Health may not be useful for a health care provider at the community level.

Third, the scope of the inventory would need to be defined. The scope would depend in part on the purpose of the inventory as well as the target user group(s). Inclusion and exclusion criteria pertaining to the addition of new models would need to be developed. The development of these criteria would need to consider whether both “new” (but not necessarily innovative) and “innovative” (but not necessarily new) models would be included in the inventory.

Fourth, thought would have to be given to how the inventory could and would be kept up-to-date. Several respondents in the current study indicated that the inventory would need to be kept up-to-date to be useful. Keeping the inventory up-to-date could be a full-time job, as new models would need to be added, the status of old models would need to be checked on a regular basis, modifications to models would need to be documented, and so on. Even if the inventory were only updated once a year, the task could be quite time-consuming.

Fifth, thought would have to be given regarding who should be responsible for maintaining the inventory. This would likely involve identifying a relevant organization that would be responsible for providing funding and/or personnel for updating and maintaining the inventory.<sup>17</sup>

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<sup>16</sup> In the Phase 1 study, many of the individuals who provided model descriptions were interested in knowing more about the inventory once it was completed. Many of the respondents in the current study also expressed an interest in it.

<sup>17</sup> The maintenance of an on-going inventory will require personnel as well as funding. These could be provided by a single organization or by a combination of organizations.

**RECOMMENDATION 3:** Approach an appropriate organization (such as Health Canada) regarding taking on responsibility for the ongoing development and maintenance of an inventory of health service delivery and/or funding/remuneration models which would have relevance for physician human resources in Canada.

**RECOMMENDATION 4:** Develop a communications document (which could be included on the Task Force Two website and/or distributed in other ways) which clearly indicates how the existing inventory will be used by Task Force Two and what Task Force Two is recommending be done with the inventory in the future.

## 5. CONCLUSION

The inventory of models was originally intended to provide Task Force Two with insights regarding how the practice of medicine will evolve over time. The existing inventory appears to be comprehensive enough to meet this goal. However, the inventory contains a wide variety of models and thus steps must be taken to determine whether some models are more relevant for Task Force Two's purposes than others. Respondents who provided validation and/or descriptions of models also saw the inventory as a potential national resource regarding health service delivery and funding/remuneration innovations. As a consequence, a number of issues regarding the future of the existing inventory were identified.

It is believed that the existing inventory will be useful in developing a physician human resources strategy. However, the inventory was developed and validated at specific points in time. As part of the development of the physician human resource strategy (which will occur in the future), Task Force Two will need to look at the potential impact of changes which have currently been identified as trends (but which are just starting to be translated into new models and initiatives). Task Force Two will also need to consider the impact that other activities, such as an increased focus on health care at both the federal and provincial/territorial levels, may have on the development and implementation of a physician human resource strategy for Canada.



**A Physician Human Resource  
Strategy for Canada**

TASK FORCE TWO

**Une stratégie en matière d'effectifs  
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