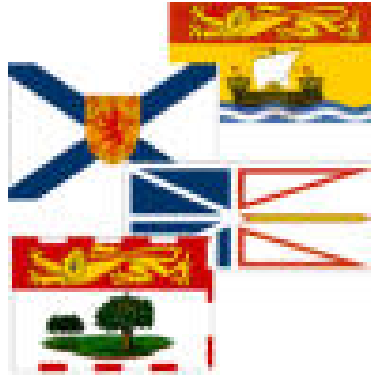

Trends and Issues in Health Education/Training

Atlantic Health Education/Training Planning Study



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Executive Summary

Med-Emerg Inc (Med-Emerg) was retained by the Atlantic Health Human Resources Association (AHHRA) to conduct a regional education/training program planning study for the four Atlantic Provinces (Nova Scotia, Newfoundland & Labrador, Prince Edward Island and New Brunswick). The objective of the Atlantic Health Education Training Planning Study (AHETPS) was to carry out a comprehensive study of the requirements for health professionals in Atlantic Canada, and the requirements for available educational/training programs in and outside Atlantic Canada. The scope of the study included 30 provider groups. The information generated by this study provided the background needed to insure balanced and well prepared health care and health education policy for Atlantic Canada.

There were two phases in the overall study. Phase I consisted of studies undertaken by the Atlantic Provinces' Departments of Health on their current supply of and future demand for specific health care occupations, encompassing both the public and private sectors. The Phase II study, which Med-Emerg was retained to conduct, consisted of seven steps that address the overall goal as stated above. They included the following:

- Carry out a comparative analysis of the Phase I studies, (Task 1 Report)
- Roll-up data contained in the provincial supply and demand studies, (Task 2 Report)
- Compile an inventory of health education and training programs,(Task 3 Report)
- Compile an inventory of health continuing education and training programs, (Task 3 Report)
- Conduct an environmental scan of health education/training issues, (Current Report)
- Develop a reusable, scenario-based education and training planning tool, and (Task 6 Report)
- Populate the planning tool and make recommendations on how to address any identified shortages or surpluses in training capacity predicted for the specified occupations. (Final Report)

This report documents the process and outcomes of the environmental scan only. The recommendations based on the planning tool are presented in the final report of this project. The purpose of the scan was to identify trends and issues that affect the supply of and need for health education/training programs. The focus of the scan was general in that it identified those trends and issues that are applicable across the professions. Such trends informed the development of the general simulation model by identifying policy scenarios that must be accommodated by the general model.



The environmental scan consisted of two key components, a detailed literature review and in-depth consultations with key stakeholders (educators, regulators of health professions, funders, employers and unions). To ensure that the literature reviewed was comprehensive and systematic, a framework of topics was developed to guide the search. The framework included sub-topics such as entry-to-practice requirements, education credentials, competencies; areas related to training programs including curriculum, teaching methods and continuing education; and areas related to faculty, students and graduates. The report consists of nine chapters which highlight both the literature and the important stakeholders' points of view. Recommendations are offered for consideration to enhance HHR planning in the future.

Educating for Changing Health Care Delivery Models

There has been a large investment made in recent years to renew Canada's publicly-funded health care system. The primary focus of these efforts has been primary health care (PHC) reform. According to the Romanow report, one of the main drivers of this reform is an examination of PHC delivery teams. As the report noted, a change in health care delivery must also be met with a corresponding change in the education and training of the various health care providers (Romanow, 2002). The trend to which the Romanow report refers is the shift from a doctor driven approach to primary care to a larger interdisciplinary team approach to primary health care. Recognizing this trend, and based on the recommendations of the Romanow report, Health Canada has begun a more targeted campaign towards collaborative teams and the interprofessional education structure that may support them. This trend was highlighted in a recent report by the Health Council of Canada (2005).

A conceptual framework for interprofessional education for collaborative practice has been developed by D'Amour and Oandasan (2004). The framework consists of two circles, one representing interprofessional education with the learner at the centre, and the other representing collaborative PHC practice with the patient/client at the centre. A critical feature of the framework is the interdependency between the two circles. The concept is that interprofessional education will generate graduates with collaborative competencies. Such competencies, together with their professions' core competencies, will enable the graduates to work more effectively in the team environment. Finally, effective interdisciplinary PHC teams will generate improved patient, provider and system outcomes.

The framework identifies the factors that must be considered when planning for such an approach to educating health professionals. These factors, if not managed effectively, can operate as barriers to interprofessional education and/or collaborative practice. For example, this approach to education and training requires a different learning structure which incorporates clinical settings where collaborative practice is modeled. Increasing



time in clinical settings may replace the time spent on other aspects of a health provider's education, such as the basic sciences. This presents the challenge of seeking trade-offs in curriculum content.

One of the key factors in determining whether the trend toward interprofessional education will maintain momentum is evidence of its' effectiveness in improving health care system outcomes. The literature review identified six randomized, controlled trials that found an association between collaborative practice and reduced hospitalization, increased access to care, improved client and provider satisfaction, and improved clinical outcome (Borrill et. al., 2001). However, there is currently a paucity of evidence that interprofessional education will generate effective collaborative practice. Thus, the need remains for research to demonstrate the effectiveness of interprofessional education in terms of the impact on patient/client, provider and system outcomes.

Education and Credentialing:

Of the many issues in health human resource planning, the increase in entry-to-practice credentials seems to be the most controversial. Many of the stakeholders had differing views on the legitimacy of credential increases as well as the control over who makes these determinations. While there is a great deal of concern over this issue, it is an issue that needs to be addressed in a controlled manner. The various perspectives are presented.

Stakeholders on both sides of the issue expressed that they have legitimate reasoning for their positions. Some suggested that a greater examination of the need of increasing credentials is required. They also shared that increasing credentials could be justified if they resulted in enhanced patient and system outcomes.

Many stakeholders interviewed in this study stressed that dialogue regarding increasing entry-to-practice credentials must occur among departments of health and education, universities, colleges, licensing bodies, and professional associations. If legitimate credential increases can be separated out, the benefits to patients can be realized while keeping the discussed costs to a minimum.

The Federal/Provincial and Territorial Ministries of Health and Ministries of Post-Secondary/Advanced Education (2004) have recently developed a set of principles to manage proposals for changes in entry-to-practice credentials. The new Entry-To-Practice (ETP) Credentials review process consists of a mix of reviewers from academics, employers, and health professionals. It is argued that both the make up of the review team and the criteria for review will make the process a comprehensive and objective one.



Certification, Licensure and Scope of Practice

There is a widespread perception that the existing structures for professional regulation, particularly legislated scopes of practice create an unnecessary barrier to the development of a more integrated health care system in general and to interdisciplinary practice in particular. A critical examination of the scopes of practice of regulated health professions by several provinces is contributing to the view that current scope of practice protections are framed in overly exclusive and restrictive terms. Romanow (2002) also commented on the long-standing tradition of carefully guarded scopes of practice and its relationship to PHC reform. Governments and health care CEOs are increasingly citing scopes of practice and traditional professional boundaries as impediments to their efforts to improve health care delivery. They claim that an alternative system of jurisdictional regulation and bureaucratically mandated scopes of practice with fewer reserved acts would help them design and implement more effective systems and ensure adequate supplies of the right level and mix of provider.

There is, however, little in the way of empirical evidence to support this position. While the relevant literature often mentions scope of practice issues and regulatory barriers as possible inhibitors to health care, this is reported with little explanation of the precise role they play in this regard. Despite the lack of supportive evidence, governments are looking closely at creating new health professions regulatory models based on broad, non-exclusive scope of practice provisions which reserve only those acts which present a significant risk of harm.

Scopes of practice and the reserving of specific acts are best considered in the context of competency-based education. It may be helpful to consider these issues using the more inclusive language of “shared competencies” rather than the exclusive language of “restricted acts” and “scopes of practice.” A detailed assessment of professional competency profiles with a view to determining areas of actual or potential overlap would seem a rational starting point for continued dialogue on these issues. These could then form the basis of interprofessional education as well as inform discussions about scopes of practice.

Recruitment and Retention of Students and Faculty

In this report recruitment refers to the acquisition of students into health education/training programs which will lead them to a degree or diploma in a health discipline. Retention refers to both the ability to retain students within the program (i.e., minimize attrition) and retain graduates following completion of their educational programs. Both recruitment and retention are critical to producing a sufficient supply of health professionals in the Atlantic Region.



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Anticipated demographic trends have the potential to impact the number of young people available for recruitment into health care professions. For example, overall negative growth is expected in the Atlantic Region over the next decade in the 18-21 year age group; this is the cohort from which most post secondary enrollment has traditionally been drawn. Initiatives to attract young people to health professions are, therefore, of strategic importance. Coupled with this is the need to have screening criteria for program entry that may help to ensure the completion of the program by those that enter.

Environmental scan stakeholders noted that when students go outside the provinces to obtain their education, they will often stay where they studied or go elsewhere without returning to their own province. For most professionals the greatest retention success is in-province education. Other factors that have impact on the retention of health professionals in the Atlantic Region is the availability of full-time positions in areas where the new and current professionals wish to practice. In addition, the essentials of quality work environments must be addressed in order to recruit health professionals and retain them in the health care system.

French Language Health Service Delivery

A key health care issue in Atlantic Canada during the last decade has been access to French language health services. There are limited education/training programs offered in French in Atlantic Canada. Of those offered, almost all are offered in New Brunswick. Further, as a result of demographic trends mentioned above, the number of qualified students available to fill seats is declining because of the decreasing numbers of students going to francophone high schools. In New Brunswick, this number is expected to decrease by 20% over the next few years.

It is also difficult to retain minority francophones in their communities after they have been trained. In many instances, minority francophones who pursue education in health care do not return to their community to practice. This can occur partly because of a combination of the limited number of programs available and the lack of clinical training partnerships with the smaller communities. This is intensified by the difficulty in finding francophone preceptors and providing continuing education programs, not only in the rural communities but also in the urban centers.

In an effort to address some of these challenges, the province of New Brunswick implemented a unique clinical education program for family physicians, audiologists, occupational therapists, pharmacists, physiotherapists and speech language pathologists. The resulting network of on-site, clinical experiences within New Brunswick's health facilities, involving hospitals, out-patient clinics and other community settings, has helped in addressing this issue. As such, students enrolled in "out-of-province" health programs are exposed to New Brunswick's health system throughout the course of their



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training, while, at the same time, developing a sense of “belonging” to the New Brunswick health team.

In 2003, the Federal Government became directly involved with the Atlantic Provinces by funding a number of programs and seats in French health education and training programs until 2008-2009. Funding was also increased to each of the provinces to increase the number of seat purchase agreements with institutions outside of Atlantic Canada. New Brunswick has historically had such agreements with Quebec. Other Atlantic provinces are using New Brunswick as a hub to purchase seats for all of Atlantic Canada.

Major interventions with respect to education and training programs have been identified through previous workshops, studies and consultations with key stakeholders. The interventions can be summarized in four main categories:

- Community participation,
- Increased collaboration with institutions and organizations,
- Promotion of health professions and the health sector, and
- Recruitment and retention strategies.

Education/Training for Underserved Rural Communities

Ensuring an adequate supply of health care providers for underserved, remote and rural communities (URR) is a problem in many jurisdictions around the world (Strasser et al. 1995). Financial incentives aimed at relocating providers to these communities from areas of relative over-supply have had only limited success (Barer and Stoddart 1991). Given that there appears to be little support for the effectiveness of financial incentives, increasing attention has been paid to the education and training of new professionals in recent years.

The Romanow Report noted a range of factors that have been found to be associated with a greater probability of providers choosing to practice in URR communities. These factors are based on an ‘evidence-based’ review of international experiences. They include:

Student recruitment:

Students who grow up or attend high school in a URR community are found to be more likely to choose a URR practice setting.

*Course content and design:*

Factors associated with an increased probability of choosing a URR practice setting include frequent and early exposure to URR practice in a training program, streamed education aimed at developing ‘customized’ skill sets for URR practice, and a significant portion of graduate training in a URR community.

Post training support:

The impact of these training-specific factors is greater where rewarding practice opportunities and career pathways are available to support URR practice. This is not restricted to the level, stability and security of income and career development but also includes support for the provider to pursue a ‘balanced’ lifestyle in terms of professional, personal and family responsibilities.

Stakeholders consulted in this project identified various educational strategies that are being followed to address the problems of URR populations. These range from policies on recruitment to training programs to the design and organization and location of those programs.

Continuing Education

The education that health care professionals undergo can be categorized into two phases: formal training and post-license continuing education. Formal education combines the theoretical and practice-based learning that develops an individual’s knowledge, skills and values in a particular discipline. To date, the curriculum has been very specific and focused on training the student with the fundamental competencies required to practice in the profession. Continuing education (CE), however, is usually more self-directed and focused on areas of the professional’s interest. CE refines the existing skills that the professional possesses in addition to developing new skills and expanding their knowledge base and expertise.

Educational institutions are sometimes limited in their involvement in delivering CE programs; the responsibility primarily lies with the professional associations (Daniels & Walters, 2002). These associations provide CE through annual, national, and regional conferences and training events that are usually based on the maintenance of competencies that they identify. In this context, a challenge is that the input with respect to employers, providers and other professions is not taken into account when the associations identify competencies. This can lead to a ‘siloes’ approach to providers’ continuing competencies in an era where interdisciplinary teams and practices are becoming increasingly the methods of health care delivery.



Educational institutions are sometimes limited in their involvement in delivering CE programs. The limited interaction between the institutions, employers and professional associations may not facilitate appreciation by the educational institutions of the profession's needs in terms of continuing competencies. While some of the stakeholders felt that educational institutions should be more involved in delivering CE, many such institutions noted that they had neither the time nor the funding for these types of programs.

Bennett et al. (2000) note that creating an ideal setting for CE is necessary for a program's success. They identified the following as key components:

- Methods of learning and development – educators have to determine what motivates adult learners;
- Translating experience into knowledge and linking professional development with practice changes;
- Problem-based/practice-based learning – approaches to CE should mirror decisions that professionals make in their daily encounters with patients;
- Organizational behavior – educators need to understand how employer organizations work;
- Team development and health goal-setting are increasingly relevant; and
- Educators must maintain their competencies, and must be current and up to date.

A cooperative effort from employers, education institutions, professional organizations and other colleagues is needed to help ensure that the above are in place. Such efforts are emerging in some of the Atlantic Provinces, whereby annual interprofessional workshops are being sponsored in partnership between the employers, the professional associations, the Unions, and the provincial government.

Summary

From a general perspective, the environmental scan reinforces that the context, goals, and partnerships in health education/training are very important. The most prominent specific issues are the momentum toward interdisciplinary PHC teams, the increasing entry-to-practice credentials in some professions, and the shrinking population of young people to recruit into the health profession training programmes.

The issues and trends identified in the environmental scan provided insight for the development of the simulation model in this project by influencing both the structure of the simulation model and the policy scenarios tested. This is an important step because the simulation model is intended to allow policy-makers to test scenarios and determine their impact on the education and utilization of health providers prior to full implementation of the policy agenda.



Recommendations

1. The changing health care needs of the population should form the basis (although not the sole consideration) of all decisions and practices regarding health care provider education, certification, licensure and full scope of practice. Population health needs and evidence of outcomes must inform what providers do, and what providers are required to do must inform how they are educated and trained.
2. Educational programmes across health care disciplines and roles need to foster the skills, attributes, and dispositions necessary for effective interdisciplinary team work. There must be emphasis placed on research to determine how to best prepare health care professionals to work in such teams. While the impact of interprofessional education on patient, provider and system outcomes in a variety of practice settings needs more research attention, there is evidence that collaborative PHC teams do improve such outcomes.
3. Educational programmes for all health care providers should offer interprofessional classroom and clinical learning opportunities to prepare them to work effectively in teams.
4. Health care provider education must be informed by knowledge of the competencies required to positively contribute to the health of individuals or populations. Detailed competency profiles provide an important basis for curriculum development and continuing education in each health care provider group.
5. A national regulatory framework would be the most effective way to influence the establishment of collaborative competencies. Appropriate regulatory frameworks for the adoption of interprofessional teams are required. Collaborative competencies will form an important part of the core competencies for professional groups to ensure appropriate outcomes for both learners and patients. A regulatory framework among the Atlantic provinces could be an important first step.
6. Key stakeholders must engage in the necessary discussion about appropriate changes in the liability of health care providers associated with interdisciplinary team practice.
7. The need to evaluate provider remuneration models is required to support the adoption of collaborative practice.



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- 8.** In the face of uncertainty regarding the impact of increased entry-to-practice requirements on system as well as client and provider outcomes, dialogue must occur among departments of health and education, universities, colleges, licensing bodies, and professional associations. Such changes must be driven by changes in the needs of populations and the efficient delivery of health care services to meet those changing needs.
- 9.** Changes to methods of certification, licensure and regulation should be considered with full knowledge and transparency as to what evidence exists to support these changes.
- 10.** As needed, the recruitment of students into health professions programmes must form part of the recruitment mandate for some provincial governments, regional health authorities, professional associations, unions, employers, etc. Exposure must start at an early age. While programmes for high schools are common place, perhaps grade school may offer another strategic target to capture the imagination of potential future health professionals.
- 11.** Use the inventory of Atlantic Canada health education/training programmes developed and delivered in this project as a model for an interactive resource that can be embraced by the educational institutions and supported by provincial governments. Determine where the inventory is to be housed and who will be responsible for administering and maintaining the database. Finally, establish an Atlantic Canada understanding for data sharing and upkeep of the inventory, including key stakeholders from educational institutions.

Chapter 1: Introduction

Med-Emerg Inc (Med-Emerg) was retained by the Atlantic Health Human Resources Association (AHHRA) to conduct a regional education/training program planning study for the four Atlantic Provinces (Nova Scotia, Newfoundland & Labrador, Prince Edward Island and New Brunswick). The objective of the Atlantic Health Education Training Planning Study (AHETPS) was to carry out a comprehensive study of the requirements for health professionals in Atlantic Canada, and the requirements for available educational/training programs in and outside Atlantic Canada. The scope of the study included 30 provider groups, as indicated in Table 1. The information generated by this study will help to inform health care and health education policy for Atlantic Canada.

Table 1: Professions Included in the AHETPS

Occupational Classification	
Audiologists	Chiropractors
Combined Lab/X-Ray Technologists	Continuing Care Workers
Dental Hygienists	Dentists
Denturists	Dieticians and Nutritionists
Dosimetrists	Health Records Administrators/Technicians
Health Managers	Home Support Workers
Licensed Practical Nurses	Medical Laboratory Technologists
Medical Radiation Technologists	Nurse Practitioners
Occupational Therapists	Orthotists
Paramedics/EMTs	Pharmacists
Family Physicians	Physiotherapists
Prosthetists	Psychologists
Public Health Officers	Radiation Therapists
Registered Nurses	Respiratory Therapists
Social Workers	Speech Language Pathologists

There are two phases in the overall study. Phase I consisted of studies undertaken by the Atlantic Provinces' Departments of Health on their current supply of and future demand for specific health care occupations, encompassing both the public and private sectors. The Phase II study, which Med-Emerg was retained to conduct, consisted of seven steps that address the overall goal stated above. They included the following:



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- Carry out a comparative analysis of the Phase I studies, (Task 1 Report)
- Roll-up data contained in the provincial supply and demand studies, (Task 2 Report)
- Compile an inventory of health education and training programs, (Task 3 Report)
- Compile an inventory of health continuing education and training programs, (Task 3 Report)
- Conduct an environmental scan of health education/training issues, (Current Report)
- Develop a reusable, scenario-based education and training planning tool, and (Task 6 Report)
- Populate the planning tool and make recommendations on how to address any identified shortages or surpluses in training capacity predicted for the specified occupations. (Final Report)

The planning tool informing this study was, fundamentally, a needs-based health human resources (HHR) planning model. Traditional HHR planning approaches consist of applying the current provider to population ratios to projected future populations in order to estimate future demand for providers. By estimating the entrance of graduates to the practice pool minus exits due to retirement, etc., the future supply of providers is estimated. In this way a classic supply and demand gap analysis is generated.

While this traditional approach is conceptually and analytically easy, it has some fundamental flaws. One flaw is that it assumes that the health status remains constant in the population for which one is planning. However, we know for example that the prevalence of smoking is declining in many Canadian populations, and smoking is associated with numerous illnesses. Further, the provider-to-population approach to planning assumes that the productivity of providers remains the same. But with new technology, productivity does not remain constant. At the push of several buttons, for example, a single nurse can adjust the level of a bed in an orthopedic ward, allowing the patient to grasp overhead rails and adjust their position. What once took three or four nurses to accomplish is now being accomplished by one. The planning model applied in this study does not make assumptions on the health status of the population or the productivity of providers, or even of entrance and exit rates from the practice pool.

From a needs perspective, the model starts with the changing population size by age and sex category (i.e. the demography) of the Atlantic Region. Applied to this is the health status (i.e., the epidemiology) of that population. The model incorporates the health status indicators that most reflect need for services of the profession under consideration. For example, for respiratory therapists the rate of chronic obstructive lung disease may be used and, for medical radiation therapists, cancer incidence may be used. Finally from a needs perspective, the model incorporates the level of service. For example, should there



be a shift in practice such that a higher proportion of diabetic patients are getting their urines tested for protein, this is an increase in the level of service and would require more service providers (e.g., more medical laboratory technologists).

The population size, the health status of that population and the level of service applied to the illnesses of that population each constitute the service requirements modeled. When these service requirements are applied to a measure of productivity of the providers under consideration, the model thereby estimates the number of those providers that are required.

Simultaneously, the model incorporates data on the training programs for that profession. The number of seats, the length of the program, the attrition rates, and the graduation rates are put into the model. Thus, the rate of graduates entering into the practice pool (provider stock) is determined. In-migration (e.g. of international graduates) is also incorporated. Exits due to out-migration, retirement, disability, mortality, etc are calculated, and the net effect is an estimation of the size of the provider stock. Applied to the provider stock is the distribution of providers by hours worked in order to account for those who work more than full-time, those who work full-time and those who work less than full-time (i.e., work-force participation). The provider stock and the hours worked are used to calculate the providers supplied.

Hence, the model generates both the providers supplied and the providers required, and permits the gap to be determined. Further, it permits HHR planners to simulate policy scenarios to determine what policies are most effective in closing the gaps, such that the providers supplied by the health care system meet, but do not exceed, the service requirements of the population served by that system. For example, if the number of seats was increased, what does that do to the gap in the short term and in the long term? Alternatively, if a new service delivery model was introduced (e.g., interdisciplinary primary health care teams) that increased the productivity of existing providers (e.g., family physicians), what does that do to the gaps?

The model is developed as a general simulation model; that is, it is applicable to every profession for which data are available. Once the general model is developed, profession-specific data can be entered and profession-specific scenarios can be simulated.

The present report is a summary of the environmental scan that was carried out for this study. The objective of the environmental scan was to identify trends and issues that affect the supply of and need for health education/training programs. The focus of the scan was to identify trends and issues that are applicable across the professions. Such trends will inform the development of the general simulation model by identifying policy scenarios that must be accommodated. The environmental scan consisted of two key

components, a detailed literature review and in-depth consultations with key stakeholders.

Literature Review:

To ensure that the literature reviewed was comprehensive and standardized for each profession, we developed a classification framework to guide the search. This framework is outlined in Table 2. The framework started with the regulatory context of the professions including sub-topics such as entry-to-practice requirements, education credentials, competencies etc. It then directed the search to aspects of the training programs, including curriculum and teaching methods. Faculty, student and graduate topics were searched. Continuing education was also searched.

Table 2: Framework for the Literature Search

Category	Sub-topics
Licensing/Regulation	Entry-to-Practice requirements Core competencies Education credentials Patient relations Quality assurance Professional misconduct
Training Program	Strategic plan Stakeholders Partners Accreditation Health care system Human resources
Curriculum	Technology Scope of practice Collaborative and core competencies Interdisciplinary primary health care teams
Teaching Methods	Interprofessional education Urban/rural Technology Teaching strategy Integrated learning
Faculty	Surplus Shortage Perspectives Interdisciplinary Demographics
Student	Retention Recruitment Prior Education Prior Career Diversity Demographic

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Category	Sub-topics
Graduate	Work + satisfaction Retention Recruitment Location International Gender Distribution Demographics Competencies
Continuing Education	Effectiveness Best Practices

The categories and sub-topics included in the framework were used as keywords crossed with each profession. The search was further refined by limiting the citations to those of the past five years (1999-2004), though on review of these articles the authors did follow-up on some earlier references. Articles with specifically Canadian content were emphasized. The literature databases searched were PubMed (formerly Medline) and ERIC.

Additional search terms were applied as the authors required more specific information. Additional searches were conducted using the same filtering criteria (published between 1999-2004; preference towards Canadian content). The additional keywords for PubMed included:

Category	Sub-topics		
Profession	Productivity Shortage Leadership Health Services Knowledge Transfer Modeling Scope of Practice Delivery Models Education Education Education	Curriculum Change Francophone Simulation Primary Health Care Canada Canada	Forecasting Interdisciplinary team work Remote Northern

The keywords for the ERIC literature search included:

Profession + Leadership + Curriculum Change

For grey literature (documents available on websites), searches were conducted online using the same search terms used on PubMed and ERIC. The search was completed using



the search engine “Google”. The “Google” search was performed with a number of limits including Canadian content and the caveat that the page had been updated within the last year. The results included material more than one year old as the websites that had been updated still contained material from previous years. However, websites that have been recently maintained generally provide higher quality information.

Stakeholder Consultations:

The second part of this environmental scan consisted of stakeholder consultations. Stakeholders were identified and interviewed for their perspectives on health education/training specifically in the Atlantic Provinces. As such, there were five categories of stakeholders:

- Educators (deans/directors),
- Regulators (of health professions),
- Funders (officials from Health and Education Ministries),
- Employers (e.g., RHA CEOs), and
- Unions.

To identify the stakeholders Med-Emerg requested suggestions from the AHETPS Steering Committee members. A list of the AHETPS Steering Committee members is provided in Appendix 1. Five to seven stakeholders per province were identified. A list of stakeholders consulted is provided in Appendix 2.

The questions used to guide the discussions with stakeholders were developed through a partnership with the Steering Committee. Trends and issues identified in the literature were presented by the consulting team to the Steering Committee, as were draft questions for stakeholders. Questions were drafted in a form that would stimulate stakeholders’ thinking without directing their responses. In general, the questions focused on health education/training programs in/for Atlantic Canada. For example, questions on recruitment and retention were targeted at recruiting and retaining students and faculty. The stakeholder questions are provided in Appendix 3.

Once the questions were determined, letters were mailed to the stakeholders who had been identified. The mailing included an introductory covering letter from the AHETPS Project Coordinator (Appendix 4) plus a letter requesting their participation (Appendix 5). Also included were the questions to be discussed. Once the letters were mailed, members of the Med-Emerg staff followed up to set appointments for a one hour teleconference. While the majority of the stakeholder consultations were conducted in English, two letters in French were sent to stakeholders at l’Universite de Moncton. Interviews with these stakeholders were conducted in French. Teleconferences were conducted by two or three members of the consulting team. This information was then



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integrated into the corresponding sections of the literature review, yielding the chapters of this report. The result is a picture of health education trends and issues which are anticipated to impact the Atlantic Regions in the years to come.

Chapter 2: Educating for Changing Health Care Delivery Models

The prediction of health care workforce requirements has proven to be imprecise at best. Such predictions have generally used assumptions based on historical data and practice patterns, but this approach has been unable to accommodate unforeseen changes in either client/patient care delivery or the broader health care system.

Complex, integrated health care systems are emerging to deal with the needs of a growing and aging population. The increasing sophistication of health care consumers is leading toward a consumer-provider interdependence model for care delivery. Rather than intermittent care for illness and injury, the movement is toward life-long care that includes health teaching, health promotion, disease prevention and early detection of potential threats before treatment is necessary.

Technology, including the explosion of the information age created by the internet, has dramatically affected the delivery of health care in our society and the approach that consumers and providers take in responding to the delivery of health care services. Twenty years ago, patients were often willing to accept the diagnosis and treatment suggested by their family doctor. Today, with the almost infinite supply of information available online, as well as the increasing inventory of alternative therapies available, the case is quite different. Clients/patients are less willing to accept their health care provider's opinion about their condition, and often arrive at their appointment equipped with the necessary information to have their provider confirm what they believe to be their differential diagnosis.

This new paradigm places existing and new health care providers in a challenging position with respect to the fundamental education they have received and their ability to keep abreast of new findings and decipher the information that is credible from that which is not. The constant reports of findings and products from the research and development community are difficult for both providers and consumers to interpret, understand and apply to their individual situations.

Stakeholder Observations

“The knowledge in medicine is broad - and it doubles every 12 months - so it would be imprudent to not expand your knowledge. This is different from how it was historically.”

While this may create a problem for providers, there are a number of new instructional technologies being developed to aid practitioners and learners. These technologies allow for the development of clinical experience, procedural skills and perceptual interpretation to be developed through the use of a range of tools. These tools include, among others, a



full body anesthesia simulator to test real time decision-making, a cardiology simulator to help interpretation of heart sounds, programs such as Primum that are designed to test the ability of practitioners to monitor a patient over time, and virtual reality programs that allow for the testing of surgical skills (Irby, 2003). These multimedia simulations help develop patient care skills among the learners who are exposed to them. Once in practice there are a number of new technologies which can aid in the process of keeping abreast of new medical developments. Web courseware and web databases have been developed to provide access to updated medical information, discussion groups, and new policies and procedures (Irby, 2003). These new databases allow practitioners to access new medical trends in a controlled and simplified manner.

All health providers must be capable of contributing to client/patient care by virtue of their knowledge, skills and their ability to adapt as new information, techniques and procedures develop. It is evident that health care provider education programs must transfer not only knowledge to its students, but develop the skills that allow the health care provider to critically develop their capacity to remain up to date with changing times.

During the last two or three decades, health professional education has been criticized for not being able to adjust quickly enough to changes in health care delivery systems in ways that are responsive to people's needs and expectations. For instance, the introduction of nurse practitioners into the health care delivery team has only recently been met with some change in the way physicians are trained to be part of the health care delivery team. However, even today the majority of medical schools do not include nurse practitioners in the care teams that are used to teach medical students the advantages of the integrated primary health care model (Health Council of Canada, 2005).

**Stakeholder
Observations**

“It sometimes takes up to 15 years to change education to reflect practice.”

Health education in many countries has not kept pace with changing demographic and health conditions, which should, ideally, influence curriculum development and educational delivery models (Bruntland, 2003). Epidemiological transition away from acute illness towards chronic, lifestyle conditions and aging populations are well-known facts and these changes will take place, “overnight” from a historical perspective. (Kalache, 1999). Caring for these patients is quite different than caring for patients with acute illness. Care requires a level of treatment which is continuous between various settings and health care providers. Collaboration is required between health care providers of various levels as well as the consumer of care. Patients require concrete plans to ensure consistency whether they visit a physician, physiotherapist or other health



care provider (Pruitt, 2005). While it will always be necessary to treat patients with acute illness, a health care education model which focuses exclusively on acute illness is inadequate (Pruitt, 2005).

In Canada a sustainable health care system is fundamental in view of these changes. Our main recourse to assure sustainability is through the process of community involvement in health promotion activities. This is a process through which people become more aware of and have better control of the causes of illness, and choose to improve their health and attain a better quality of life. The challenge for those promoting health within the communities lies in a deeper understanding of both biomedical indicators of health and their social determinants.

Society's changing needs, advancing knowledge, and innovations in education require constant changes to the health education/training curricula. A review of the literature by Bland et al, (2000) suggests that successful curricula change occurs only through the dedicated efforts of effective change agents. Their study systematically searched and synthesized the literature on educational curricula changes at all levels of instruction, as well as organizational changes to provide guidance to those who direct curricula change initiative.

In spite of the highly diverse literature reviewed by Bland et al, a consistent set of contributing factors emerged as being associated with successful curricula change. Specifically, these characteristics are in the areas of the educational organization's missions and goals, history of change in the organization, politics (internal networking, resource allocation, relationship with the external environment), organizational structure, need for change, scope and complexity of the innovation, cooperative climate, participation by the organization's members, communication, human resource development, evaluation and leadership.

Many of these same factors are at play in what appears to be the most prominent emerging trend in Canadian health professional education and training, interprofessional education for collaborative PHC practice.

Stakeholder Observations

“There is a lack of partnership. There needs to be more cooperation between governments, educational institutions, and professional associations.”

Interprofessional Education for Collaborative Practice

There has been a large effort in recent years to renew Canada's publicly-funded health care system. The primary focus of these efforts has been PHC reform. According to the Romanow report, one of the main drivers to this reform is an examination of primary care delivery teams. As the report noted, a change in health care delivery must also be met with a corresponding change in the education and training of the various health care providers (Romanow, 2002). The trend to which the Romanow report refers is the shift from a doctor and nurse driven team to a larger interdisciplinary team. Recognizing this trend, and based on the recommendations of the Romanow report, Health Canada has begun a much more targeted campaign towards collaborative teams and the interprofessional education structure that may support them. This trend was highlighted in a recent report by the Health Council of Canada (2005). One of the key factors in determining whether this trend will maintain momentum is the effectiveness of interdisciplinary PHC teams in improving health care system outcomes. This matter is examined in the next section.

Effectiveness of Interdisciplinary Primary Health Care Teams:

There has been preliminary research that supports the effectiveness of collaborative PHC teams. In 2001, Borrill et al. published a report entitled "The Effectiveness of Health Care Teams in the National Health Service". The report was commissioned by the UK National Health Service, and was conducted by investigators at Aston University, the University of Glasgow, and the University of Leeds. The authors described the literature up to year 2000, and made the following summary statement, "[T]eams have been reported to reduce hospitalization time and costs, improve service provision, and enhance patient satisfaction, staff motivation and team innovation" (Borrill, 2001).

The present review of the effectiveness literature examined only those articles that reported on health outcomes (including client satisfaction), service provision (including provider satisfaction), hospitalization and costs. All such articles cited by Borrill et al were reviewed as were all additional articles identified in our search between the years 1999 and 2004. The identified studies are described below in categories of increasing strength of methodology: uncontrolled studies, controlled but not randomized, and randomized controlled trials.



Four uncontrolled studies were reviewed. Jackson et al. described the comparison of service provision before and after the introduction of a mental health team into a UK community. They reported increased “inception to care” and increased availability of specialist care (Jackson, 1993). Ross et al. interviewed UK nurses with recent experience working as part of on primary health care teams (PHCTs) and they reported that team approached care reduced duplication, streamlined patient care, and increased use of specialist skills (Ross, 2000). In studying PHCTs from the Health Service Primary Care Authority in Navarre, Spain, Goni reported that higher functioning teams achieved greater perceived quality by users, greater job satisfaction for the employees, and greater efficiency for the administration (Goni, 1999).

Stakeholder Observations

“We need to look at some effective demonstration projects for collaborative teams – to track and see how practitioners are able to cope and address patient needs.”

Borrill et al. collected quantitative and qualitative data from approximately 400 teams (primary and secondary health care teams) in the UK between 1998 and 2000. Using a program logic-like model, they collected data on input indicators (e.g., resources, team task, organizational context, team composition), process indicators (e.g., clarity of objectives, leadership, reflexivity, communication), and output indicators (e.g., team effectiveness (self & externally rated), clinical outcomes and cost effectiveness). They found that the clearer the team’s objectives the more innovative they were, and the more effective they were across virtually all domains of functioning. They found that the greater the role clarity the better the peer support, and the better the satisfaction of providers. Lack of team leadership was associated with low levels of team effectiveness and innovation. Professional diversity on teams increased innovation. (Borrill, 2001)

Several non-randomized controlled studies were reviewed. Sommers et al. compared PHCTs with traditional physician care across 18 private practices in the UK, focusing on elderly patients with chronic illness. The prominent observations of this study were reduced hospitalization and costs associated with the PHCTs (Sommers, 2000). Jones compared UK families receiving team care with control families, noting not only fewer hospitalizations but more visits to the primary care physician for health supervision in the families receiving team care (Jones, 1992).

Jansson et al. (1992), reporting on PHCTs introduced in one region in Sweden but absent in a comparison region, documented a reduction in emergency room visits, a rise in the number of patient contacts with the district nurse, and improved accessibility to care. Similarly, Sharma et al. (2001) reported on the evaluation of the Liverpool Primary Care Mental Health Project (PCMHP). Data were collected on all patients who came into



contact with the PCMHP team during a three-year period and compared with data available for the five neighbouring conventional practices. The number of referrals remained the same over the three years in both groups. While the use of inpatient beds by the study group dropped by 38%, there was an increase in the comparison group in the same period. Waiting time between referral and assessment for new patients reduced from six weeks to between one and two weeks, while in the comparison group the wait time did not change. General practitioners and patients were very satisfied with the PCMHP service (Sharma, 2001).

Solberg et al. conducted a before-after study of three volunteer intervention clinics and six control clinics in the greater Minneapolis-St. Paul area to learn whether a collaborative care intervention improved the process and outcomes of care for patients with depression. The intervention included a set of five management options that primary care physicians could order for their patients. However, few physicians selected the collaborative care management option, and therefore few patients actually experienced the team-based service delivery option. Thus the study's failure to demonstrate effectiveness of collaborative care can be attributed to provider non-compliance. (Solberg, 2001)

Six randomized controlled trials were identified, each of which demonstrated a positive effect of PHCTs. The key observation in two of these was reduced hospitalizations and costs: Eggert et al. (1991), compared team-based case management with individual case management of elderly US patients with chronic illness; and Hughes et al. (1992), compared team-based home care with customary home care for 171 terminally ill patients from a US Department of Veterans Affairs hospital. Other such trials have documented increased access (Samet, 2003), improved patient and provider satisfaction (Hughes, 2000), and improved clinical outcomes (Unutzer, 2002; Burns, 2000).

Only one study was identified that documented no effectiveness of PHCTs. This may reflect a publication bias such that null findings did not make their way into the literature. It is also possible that the review by Borrill et al, which we relied upon for identification of articles published prior to 1999, did not include negative studies. If so, that represents a deficiency of the present review. This point notwithstanding, the consistency of positive observations, particularly among the reported randomized controlled trials, does present a case for the effectiveness of PHCTs. It also demonstrates, however, the need for further research into the overall effectiveness of PHCTs.



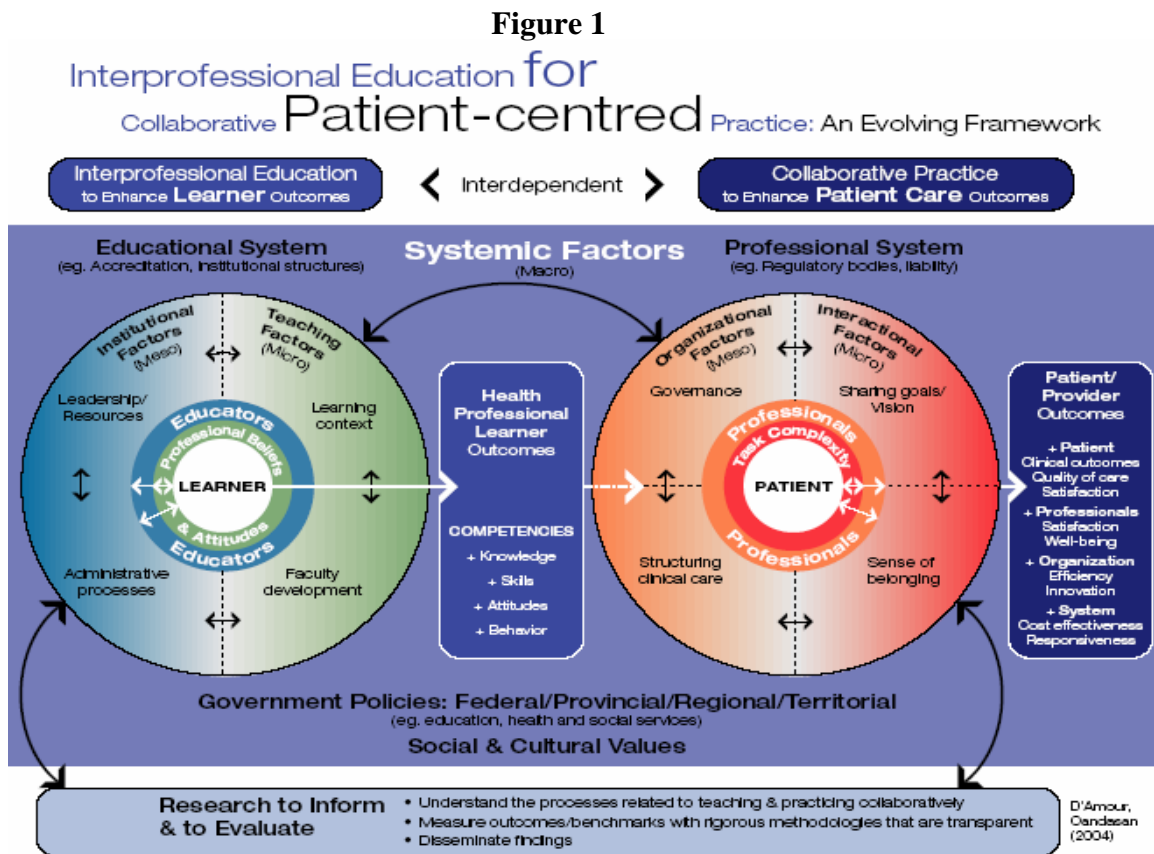
A Framework of Interprofessional Education for Collaborative Practice:

Health Canada and other stakeholders have recognized that collaborative teams may have a number of benefits in the delivery of PHC. It has also recognized that collaborative practice may require collaboration among health care service professionals at a learning level. As a result, Health Canada has adopted an initiative on interprofessional education for collaborative patient-centred practice (IECPCP). The specific goals of this initiative include:

- Promoting and demonstrating the benefits of interprofessional education for collaborative patient-centred practice;
- Increasing the number of educators prepared to teach from an interprofessional collaborative patient-centred perspective;
- Increasing the number of health professionals trained for collaborative patient-centred practice before and after entry-to-practice;
- Stimulating networking and sharing of best educational approaches for collaborative patient-centred practice; and
- Facilitating interprofessional collaborative care in both the education and practice settings (Health Canada, 2003).

Health Canada has provided funding for the study of IECPCP, including \$19.3 million for institutions interested in developing IECPCP programs. The programs, in order to be funded, must include a number of different institutions and practice sites, and must have involvement from patients and stakeholders (Health Canada, 2004). It is anticipated that the research and development that arises from this initiative will lead to a more responsive PHC system.

As part of the IECPCP initiative, Health Canada commissioned a study to identify the possible correlations between collaborative patient-centered practice (CPCP) and interprofessional education. The study concluded that interprofessional education and CPCP, while independent entities, were very much interdependent. Another result of the study was the development of a framework for IECPCP (D'Amour and Oandasan, 2004). This framework is presented in Figure 1.



The first circle in the framework deals with the learner/health service professional. There are several factors which may act as barriers to interprofessional education at this level. Such education requires a different learning structure which frequently exposes the students to clinical settings where collaborative practice is modeled (D'Amour, 2004). Another possible barrier is the question of timing. Health service professionals will acquire knowledge and proficiency at different stages. Some suggest that if interprofessional education is instituted too early it may be ineffective as the learners will not have the proper grounding in their own disciplines (Curran, 2004). Others feel that it is something that should be instituted as soon as possible to provide team experiences throughout all levels of learning (Pipas, 2004 and Steele, 2001). In all cases, interprofessional experiences may replace the time spent on other aspects of a health provider's education. This in turn can lead to resistance among affected faculty.

Faculty attitudes and beliefs may also serve as a barrier to interprofessional education. There may be a reluctance to participate in these programs due to the time involved in their establishment (Szarek, 2001). Interprofessional education will involve members from varying faculties. These relationships take a great deal of time to establish (Muller,

2001). These delays may cause some faculty members to drop out of the process prematurely or refrain from participating from the outset.

Akin to this, faculty may be influenced by competition for organizational resources, they may have vastly different teaching philosophies, and there may be preconceived notions of power and control which bar them from working in interprofessional teams (Dyer, 2003). Finally, there are apprehensions among faculty about criteria to judge performance for promotion and tenure. Often, these criteria do not consider teaching and doing research in interdisciplinary teams. There are concerns among faculty members of being caught between their departments and the new interprofessional education program (Muller, 2001). If there is not clarity about roles and risks involved then faculty may be very reluctant to participate in interprofessional education programs.

Barriers at the institutional level can include a lack of leadership or resources, or a lack of the proper administrative processes. Institutions are structured on a discipline basis which promotes segregation, not collaboration between the various health service programs (Curran, 2004). Building on this problem are the varying requirements for admissions, time-tabling issues, methods of administration, and the differing powers of deans for the various health service faculties (Gilbert, 2004). Another barrier has to do with attitudes in the institution. If the deans of the various departments are not supportive of an interprofessional education program, and do not provide adequate financial support, then the programs will likely have little or no chance of success.

If the barriers mentioned above can be overcome, learners exiting the first circle will possess the following collaborative competencies which are necessary for interaction with PHC teams. These competencies include:

- Understanding roles and cognitive structure of other professions;
- Health goal directedness-goals that transcend disciplinary boundaries;
- Disciplinary articulation - respect knowledge of own and others' roles;
- Communication skills;

Stakeholder Observations

“Although students may not be able to bring in their sense of discipline until later on in the program, there is still added value to have it in the curriculum from the earlier stage.”

Stakeholder Observations

“We all study the same body, so why can't we be more successful in promoting an interdisciplinary curriculum for core elements? Some have evolved from a silo approach to a systems approach.”



- Role negotiations;
- Information sharing;
- Collegial support;
- Flexibility - open-mindedness and tolerance, willingness to pursue innovation;
- Cooperation and coordination;
- Conflict resolution skills;
- Group skills including collective accountability; and
- Leadership skills (D'Amour, 2004).

The second circle in the model (Figure 1) represents the patient/client served by the interdisciplinary PHC team. In this circle the competencies acquired by the learners are put into practice. However, if collaborative practice is not present or encouraged at the practice sites then the competencies acquired at the learner level may not be exercised. This was a point echoed by a number of the key stakeholders. Some stakeholders articulated that if the practice setting was not changed, interprofessional education would not be an effective means of training health service professionals.

The barriers to collaborative practice operate mainly at the professional level. Many health professionals lack effective training in teamwork and do not know how to pursue a leadership role in developing a team (Gilbert, 2004). Another challenge is the hierarchy between health professionals, coupled with an inequality of the status of the various disciplines within the health care system (Curran, 2004). There are a number of disciplines for which services are not covered by the PHC system. For example, a child with a cleft lip will have the surgery covered. However, the consultation and X-Rays completed by the oral health professional will not be insured. Disparity between insured and non-insured health professionals can serve as a barrier to the development of PHC teams. Teamwork may also involve a redrawing of professional boundaries which is never an easy process to achieve (Curran, 2004). As some of the stakeholders noted, there is a great deal of “turfism” in the health field. Finally, there are serious challenges regarding medical liability. If health service professionals are practicing in teams there may be serious questions over liability insurance.

There is a tendency for the law of torts to focus on individual responsibility. This may cause problems for the courts when trying to determine liability for a primary health care team (Lahey and Currie, 2004). The fundamental difficulty is that lawyers and the courts are used to the historical interpretation of scopes of practice where a physician or other

Stakeholder Observations

“There needs to be an articulation of public policy, preferably a national one which puts oral health care under the umbrella of total health.”

provider acted independently. This interpretation allowed courts to examine the relevant case law to determine how liability had been decided in the past (Lahey and Currie, 2004).

If the courts are not kept informed about how scopes of practice are impacted by the new interdisciplinary teams, then determining liability may be a major challenge. There is, however, some evidence that courts will be able to make the adjustment given the proper guidance. In 1999, the case of *DeJong v. Owen Sound General* was decided. This case involved an interdisciplinary team on the psychiatric ward of the hospital in question. The court found that there was individual liability among the practitioners as they had failed to properly monitor the patient resulting in his injuries. However, they also found negligence in the fact that the team had not functioned effectively, failing to determine a treatment strategy or even to conference on the patient's care (Lahey and Currie, 2004). It appears that the courts will be able to develop some strategies for dealing with interprofessional teams.

The final problem of liability revolves around health care institutions. There is a concern that hospitals and regional health authorities could bear more than vicarious liability for the actions of interdisciplinary teams. Courts could interpret the policies and procedures for interdisciplinary teams as major contributors to team negligence, and therefore find direct liability.

The other possible legal challenge centres around the standard of care required for the various health care professionals. A standard of care is the legal determination by which a defendant's actions are measured. Generally speaking, common law courts, such as those in Canada, use the reasonable person standard for determining the provision of care. For a medical practitioner the standard is whether the person acted "in accordance with the conduct of a prudent and diligent doctor [or other provider] in the same circumstances" (Lahey and Currie, 2004). The challenge for interdisciplinary teams is what standard of care will be applied. For example, if a nurse practitioner is performing an act previously undertaken by a physician, will s/he be held to the physician standard of care? In general courts have erred on the side of the patient holding health care providers to a higher standard of care (Lahey and Currie, 2004). Also, physicians may be held to their traditional standard of care when in fact they do not have as much control over patient

Stakeholder Observations

"The medical field may have advanced, but regulatory bodies are 19th century in their thought."

"Tort law is a large piece of the culture of scopes of practice/ collaborative practice because many procedures are dependant on who carries the liability."



treatment in a team environment. As with many of the barriers to interprofessional education and practice, there are certain ways in which the challenges of medical liability can be addressed. The record keeping of the teams can be done in such a way to present a clearer picture of the treatment to the courts. Records should clearly indicate the role of each provider (Lahey and Currie, 2004).

Tort reform may be another avenue to disarm the medical liability issue. This could involve the formulation of regulated standards of care (Lahey and Currie, 2004). This would allow courts to apply the actions of health service providers to concrete statutes rather than case law which do not reflect the reality of interprofessional teams. The ultimate problem is that courts rely on case law in formulating their decisions. It often takes courts some time to catch up with the advances in the health care sector. If governments and health care provider organizations are proactive in informing the courts of the changes inherent in interprofessional practice, e.g. changes in legislation and regulatory practices, the concerns over medical liability may be greatly alleviated.

If the above mentioned barriers can be overcome, and the learner and patient circles of the framework in Figure 1 can be made to operate effectively, the previously mentioned patient, provider and system outcomes may be sustained. Outcomes for the patient include improved clinical outcomes, quality of care, and satisfaction; for the provider, satisfaction and well-being; for the organization, efficiency and innovation; and finally for the system, cost effectiveness and responsiveness.

Influencing both learner and patient outcomes are macro level forces that directly affect the health care system itself. These forces can include such measures as government policies and funding (D'Amour, 2004). The issue of funding models is certainly an issue that needs to be addressed. For example, the models as they exist today in most jurisdictions do not encourage collaborative practice. Capital funding may be required for office structures that support team functions, and the funding model must accommodate managerial staff support for the team. Governments also need to provide funding for further research to inform and evaluate IECPCP so that we can understand the processes and measure key outcomes related to teaching and practicing collaboratively (Oandason, 2003).

The framework in Figure 1 suggests that IECPCP can have positive outcomes for both patients and the health service professionals who work with them. While the work by D'Amour and Oandason display the possible connection between interprofessional education and improved patient outcomes, there is still a need for further research.



Many of the stakeholders interviewed suggested that although the idea of interprofessional education was intriguing, they wanted further proof of the positive impact on patients. Some felt that further research may lead to a greater acceptance of interprofessional education and collaborative practice.

The following section highlights a number of Canadian initiatives which have been successful in implementing some form of interprofessional education.

Canadian Interprofessional Education Initiatives

Recognizing its importance, various institutions within Canada have developed initiatives for implementing interprofessional education.

- Nova Scotia introduced a program as part of its initiative to strengthen PHC. They set up sites for generalist physicians and nurse practitioners to work in collaboration in the delivery of PHC. The process was facilitated by an initial educational session on roles and responsibilities as well as a number of continuing education sessions to address any issues that had become apparent in the collaborative practice (Martin-Misener, 2004).
- Memorial University established the Centre for Collaborative Health Professional Education in 1999. The main goal of the program is to facilitate collaborative educational experiences for students in various health professional programs. The Centre aims to provide education-related training, and it plans to develop simulated patient/client programs for training and assessment (CCHPE, 2003).
- Dalhousie University offers an interprofessional program. This program offers opportunities for students from the Faculties of Dentistry, Medicine, and the Health Professions to learn first hand through team approaches to learning. In this way they learn about other's roles and responsibilities (Samland, 2004).
- Interprofessional Education Initiative in Northern Ontario aims to allow students to explore collaborative practice in a northern setting through tutorials and other learning experiences (Samland, 2004).
- The University of Saskatchewan has a number of interprofessional education initiatives. They are working on interprofessional courses at the undergraduate level, the postgraduate level, interprofessional continuing education, and interprofessional clinical education (Samland, 2004).
- The University of Alberta has established a program which introduces

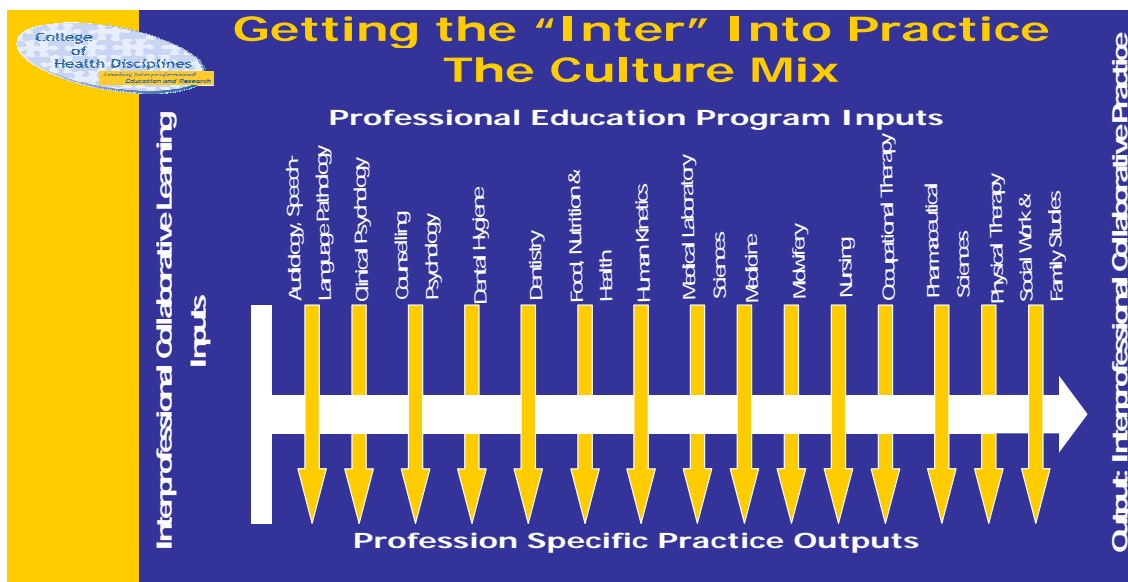
Stakeholder Observations

“We need evidence for providers – the patients/public are there – we need to show how a team effectively works on the ground.”

interprofessional learning into courses related to rehabilitation (Samland, 2004).

- The College of Health Disciplines at the University of British Columbia (UBC) offers education through a collaborative process (Gilbert, 2002). The professions involved need to set up a framework which facilitates interprofessional education. The College of Health Disciplines at UBC serves as an effective model for institutional structure. In this model (see Figure 2), the interprofessional education runs across the professional education programs. There is a neutral college which administers the interprofessional education piece. Institutions also need to restructure faculty reward systems to include recognition of interdisciplinary scholarship.

Figure 2: The UBC Model of Interprofessional Education



Competency-Based Approach to Education and Workforce Development

Competencies, according to the D'Amour and Oandason (2003) model, are a necessary output of the learner circle. Identifying professional and team-based competencies may help to inform educational programs and even practice models. The American Council of Medical Colleges (2001) describes the well-rounded health care professional as someone who demonstrates the following attributes:

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Literacy, clinical competence, lifelong learning skills, evidence-based practice, interdisciplinary teamwork, balance between healthcare and disease prevention/promotion, inculcation of professional values and ethical behavior in practice, optimal use of resources and consciousness of well-being of self and colleagues.

If health care providers are to contribute effectively to the health care needs of the population, the basic clinical competencies of each health care provider group must be identified and used as the basis for curriculum development and continuing workforce development. Competencies are defined as the knowledge, skills, and abilities demonstrated by organizational or system members that are critical to the effective and efficient function of an organization or system (Moloughney, 2004).

In a variety of health disciplines extensive competency profiles exist and are regularly revised through formal processes. In the majority of cases the competency profile is used by educational institutions as the basis of curriculum development and by accrediting bodies to ensure practitioners are educated and trained in ways that match current trends in health care delivery. The Canadian Medical Association Conjoint Committee on Accreditation, for example, requires as a basic standard that educational institutions clearly cross-reference each competency to a specific course or learning experience within a program's curriculum.

In nursing competencies serve as the basis for curriculum development and program approval for education programs that prepare entry level RN's (College of Registered Nurses of Nova Scotia, 2003). Entry-level competencies continue to evolve to reflect new directions in the health care system. However, the increasing complexity of health care has placed increasing demands on practitioners to provide competent care, learn new skills and practice in various and evolving health care settings.

This has made the transition from new graduate to practicing health professional more difficult than in the past, and has made it imperative to identify essential competencies needed for initial and continuing practice (College of Registered Nurses of Nova Scotia, 2003). Preparation of beginning practitioners requires a dynamic and responsive educational system. It is critical that those in education and practice sectors collaborate to identify these essential required competencies (CRNNS, 2003).

Health care providers do not provide care in isolation as they use their knowledge and skills in combination with other human and non-human resources to meet health care needs (Birch, O'Brien-Pallas, Alksnis et al., 2002; Tomblin Murphy & O'Brien-Pallas, 2002). Current initiatives in primary health care further highlight the need for providers to work in integrated teams and networks focused on meeting patients' needs. As

mentioned above, research is showing that an interdisciplinary approach to care provision has the potential to improve patient outcomes.

Part of the appeal of the competency-based approach is that it provides a foundation to describe and convey professional practices that are often perceived as a group of disparate activities without much coherence (Bach, 2001). It has also been suggested that there are sets of core competencies applicable to a significant cross-section of entry-level health professions. A primary challenge in preparing care providers for the future is the identification and development of core competencies that can reasonably be shared across professions to enable them to practice effectively and collaboratively (Ehnfors & Grobe, 2004).

The competency-based approach, which involves focusing primarily on behaviour rather than on qualifications and fields of professional practice, has the potential to help deconstruct barriers between occupations and encourage interdisciplinary work and flexibility on the part of professionals (Dallaire & Normand, 2002). The U.S. Institute of Medicine (2003) for example, has outlined five core competencies for health professionals and has recommended that education programs be altered to prepare entry level practitioners to use core competencies in providing patient care (Long, 2003).

To determine a core set of competencies applicable to a range of health professions it will be necessary to conduct a detailed assessment of each existing competency profile with a view to determining areas of actual or potential overlap; these could then form the basis of interdisciplinary education as well as inform discussions about scopes of practice. Recently the World Health Organization (WHO) presented five core competencies for effective care of patients with chronic conditions. They agreed upon: patient-centred care, partnering, quality improvement, information and communication technology, and a public health perspective. The acceptance of these competencies will necessitate a greater acceptance of collaborative practice (Pruitt, 2005).

Stakeholder Observations

“The competency-based model is the way to go – there is a need to have clearly defined outcomes. However, it is important to note that sometimes the outcomes established nationally are not always written well and clear. They need to include both educators and employers in designing outcomes which have clear standards and conditions”

“Competency-based education may facilitate movement from the silo approach, but this will depend on how the programs are delivered.”



Provider groups that do not at present have detailed competency profiles should be encouraged and supported in their development. A number of the stakeholders interviewed felt that the competency-based approach would be the right avenue to pursue. The development of these core competencies may significantly impact the development of both interprofessional education and collaborative practice.

The following section examines some of the possible costs associated with changing the way that health care providers are educated.

Cost Implications of Changing Learning Methods:

As was noted earlier, the teaching methods employed in training health care providers may have a large impact on the success of any interprofessional education program. It is likely that the traditional teaching methods employed in individualized health programs will not be as effective for team-based learning.

There are a number of alternatives to the traditional didactic teaching methods including problem-based learning (PBL) and case-based learning. These learning methods employ small-group instructional models. A group of students is brought together to examine problems/cases and participate in discussions to share knowledge and build understanding (Irby, 2003). PBL techniques encourage discussion and critical thinking, and enable the integration of theory with clinical components. This approach also leads to greater communication and collaboration. Case-based learning, a variation of PBL, is currently the most popular method used in Canada to facilitate interprofessional education (Curran, 2004). According to Curran (2004), learners must be able to transfer what they have learned to the real-world and the use of cases is helpful in establishing a real world context in which the new learning is to be used. Working with cases "exposes students to problematic, real-world situations and challenges them to apply course knowledge to analyze the issues and formulate workable solutions."

PBL has been adopted in some medical and nursing programs. Considerable attention has been given to the comparison of the skills and performance of graduates of PBL with graduates of traditional, large group lecture-based methods. However, much less attention has been given to the implications of these alternative methods for the costs of training health care professionals.

A comparison of PBL with the traditional approach in a US medical school found that the total costs to the medical school of producing a graduate was roughly the same under both approaches although PBL involved a considerably greater proportion of faculty time

Stakeholder Observations

"A competency-based skills assessment must be something that we 'hang our hat on'."



in direct contact with students (i.e., a smaller preparation/contact ratio) (Menin and Martinez-Burrola, 1986). However, the authors noted that the study did not include any estimate of the considerable time required by community physicians in their roles as preceptors under the PBL model. Although this time was provided on a voluntary basis, it is an important opportunity cost of the program (it reduces the potential supply of physician services from the available stock of physicians). Hence, the consideration of adopting alternative models of training should quantify the full resources required for the effective delivery of these programs. For example, where there is excess demand for family physician services, as is the case in many parts of the country, models of education that require the input of substantial amounts of family physician time risk exacerbating current problems in the delivery of primary care.

A shortage of sufficient preceptors has been presented as a reason for the reduction in admissions to the pharmacy program at Memorial University while the Nursing program faces similar challenges (Newfoundland and Labrador Health Boards Association 2003).

It might be argued that physicians are unlikely to volunteer this time at the expense of service provision since under fee-for-service systems of remuneration this will involve a loss of potential income. In other words, time would only be volunteered where there is no market demand or publicly-funded need for more service delivery. However, physicians and other providers are not motivated by only income. Non-pecuniary motives, such as a sense of obligation towards training future providers might explain a provider's willingness to volunteer time to training even in the presence of demands for income-generating services. Moreover, the increasing adoption of alternate payment methods (e.g., capitation, salary) among health care professions may mean that there is no direct impact on provider income for devoting less time to service delivery and more time to education.

Similarly, a UK based study calculated the costs of decentralizing medical training among community-based general practices with two students per practice (Murray et al. 1995). Although no direct comparisons were made with the traditional approach, the authors concluded that the estimated cost per session of approximately 60 UK pounds indicated that community-based education was not a cheap option.

Stakeholder Observations

“Challenges that they are faced with are the resources to carry such a program out- problems of funding.”



Jones and Korn (1997) reviewed the literature on the costs of medical education and found that the cost of training a physician ranged from \$72,000 to \$93,000 in 1996 US dollars. Instruction costs made up approximately two thirds of this figure. They noted that observed trends in training such as PBL, small group teaching, use of information technology, ambulatory settings offered no savings for medical education.

These possible costs may have an impact on the development of interprofessional education programs. As identified earlier, one of the key determinants of an interprofessional program's success is the ability for students to have hands on experience with providers practicing in a collaborative setting. If there are difficulties in identifying a sufficient number of preceptors then interprofessional education programs will be largely ineffective. Additionally, if the new programs do not reduce the training costs of health providers there may be less incentive for educational institutions to establish case-based or problem-based interprofessional education programs.

Summary:

There has been a great deal of focus on reforming Canada's primary health care system. Providers need to be able to adjust to increasing technology, changing population health needs and other practice modifications. One of the key trends that has been examined is the possibility of collaborative practice teams. Health Canada commissioned a study to examine their possible effectiveness. The result was a conceptual framework for interprofessional education for collaborative practice. (D'Amour and Oandason, 2004)

This framework consists of two circles, one representing interprofessional education and the other representing the patient served by the collaborative practice model. The model suggests that the competencies acquired through interprofessional education affect directly the effectiveness of collaborative practice. It also suggests that effective interdisciplinary health care teams may lead to improved outcomes for patients, providers, employers, and the health care system itself.

There are some possible challenges to interprofessional education and collaborative practice. These include faculty support, medical liability issues, scope of practice, and curriculum conflicts among others. There have been some Canadian initiatives that have shown that interprofessional education is feasible. However, there needs to be more research on interprofessional education. If increased patient, provider and system outcomes can be demonstrated, interprofessional education may obtain the momentum that it requires.

Chapter 3: Education and Credentialing

Of the many issues in HHR planning, the increase in credentials seems to be one of the most controversial. Many of the stakeholders have differing views on the legitimacy of credential increases as well as the control over who makes these determinations. While there is a great deal of concern over this issue, it is an issue that needs to be addressed in a controlled manner. The various perspectives presented below need to be thoroughly addressed and a compromise reached. This issue needs to be diffused to allow for debate and discussion on other pressing matters.

There is a current trend among many health care provider groups to increase the educational requirements necessary to gain access to provincial or national certification exams, thereby altering entry-to-practice requirements. Recent examples include the Canadian Association of Medical Radiation Therapy requiring a baccalaureate for entry-to-practice to the fields of Radiological Technology, Radiation Therapy and Nuclear Medicine Technology by 2005; the Canadian Society of Medical Laboratory Sciences will require baccalaureate preparation by 2010; the Canadian Alliance of Physiotherapy Regulators and the Canadian Physiotherapy Association (2002) have recently mandated an entry-level Masters Degree standard that will require all Canadian universities to comply prior to 2010.

Provider groups and professional associations promote the need for enhanced educational requirements as an honest response to the growing complexity of their role within the health care system, as well as recognition of current market trends (particularly those emerging in the U.S.). For example, the Executive Director of the Canadian Association of Medical Radiation Therapists (2003) has cited reasons having to do with potential benefits to patients, technologists and management, as well as the results of an environmental forecast, as justification for a baccalaureate entry-to-practice requirement.

Stakeholder Observations

“National accrediting bodies are increasing the entry-to-practice requirements for health professionals and this causes concern for both post-secondary educational institutions and governments, and holds the health provider groups ransom.”

“One must question the motivation behind increasing credentials; i.e., is it just to increase the profession’s stature? It does not seem to be responding to the needs of the system because there is no dialogue with the system. The health system has not changed as dramatically as seems to be indicated.”

Governments worry that changes in entry-to-practice requirements are proposed and implemented unilaterally by professional groups without consultation and with little informed consideration of the potential broader implications (e.g. increased salary expectations). The more well-established and powerful professions have reacted to the prospect of enhanced educational preparation for emerging professions with a degree of defensiveness similar to that encountered when their traditional scopes-of practice are challenged.

Regrettably, the language employed by those opposed to the current trend to heighten entry-to-practice requirements is often pejorative (e.g., creeping credentialism, piling-on, keeping up with the Joneses, etc.); while those in favour suggest that opponents are reactionary and interested in maintaining the status quo for reasons of political expediency. The combative tone of the debate is itself creating a barrier to the cooperative and well-informed assessment of the educational, certification and licensure needs of health care providers.

In response to the fear that increased entry-to-practice requirements will create a barrier to dealing with current and future health human resource needs, it has been proposed that training programs be shortened, made more task-specific, and that locally determined competence requirements and certification processes be introduced that would be under the substantial control of jurisdictional governments and local health care organizations (Tomblin Murphy & O'Brien-Pallas, 2002). However, there appears to be no evidence to suggest that this solution would do more than provide a very short-term fix for a long-term HHR planning issue.

Further, while task-specific learning can be accomplished equally well in a variety of settings or program delivery models, other competencies and attributes are best learned within a university setting (Tomblin Murphy & O'Brien-Pallas, 2002). From a survey of employers, Anderson and colleagues (1997) were able to compile a list of competencies valued in the work and ranked according to how well graduates in the radiological imaging field performed in the relevant areas. Those competencies in regard to which providers performed least well are those that go beyond essential tasks and which are typically included in university-based health professions curricula but not in traditional educational settings.

**Stakeholder
Observations**

“The responsibility for determining the length is outside of government, but there should be an increased role for the government - primarily because the government is the employer - otherwise, where is the accountability?”

Trends and Issues in Health Education

Studies in nursing continue to empirically demonstrate the advantages of broad-based health profession education programs (Tomblin Murphy & O'Brien-Pallas, 2002). In the community sector, clients cared for by baccalaureate prepared nurses required fewer visits, and the odds of improved outcomes related to health knowledge and behaviors were 2.2 and 1.7 times greater than when cared for by other staff (O'Brien-Pallas et al, 2001, 2002). In the hospital sector, baccalaureate prepared nurses left fewer interventions undone or delayed than did the rest of the nursing workforce (O'Brien-Pallas, Thomson et al, 2003). Freeman (2004), in a study of family caregivers of hospitalized patients, found that family members were more apt to participate in the family member's care when patients were cared for by baccalaureate nurses. Estabrooks et al, 2005, found that hospitals with greater proportions of degree prepared nurses versus diploma prepared nurses had lower 30 day mortality rates. Thus, a body of evidence is building for nursing. There remains, however, a need for testing the outcomes of such educational enhancements in other professions as well.

While there may be many potential benefits to increasing credentials and entry-to-practice requirements, it is important to balance these potential benefits against the possible increased costs of such changes and the permanent reduction in supply that it may generate. In particular, an increase in the length of a training program may result in:

1. An increase in the average cost per graduate of the program,
2. A reduction in the annual supply of graduates, and
3. A reduction in the maximum potential years of output by each graduate.

For example, consider a three year training program that admits 100 students a year. If each graduate were on average to contribute 25 years of service to the health care system, assuming 100% of entrants complete the program, this would produce 2500 person years of service for the health care system (or 833 person years per year of the program). Suppose the training program is increased to five years with the same admission and completion rates. Each graduate now has only 23 years to contribute, because two more years are absorbed by training. Hence, the program will produce only 2300 person years of service (or 460 person years of service per year of the training program).

In other words, the addition of two years to the training program reduces the returns to training at least in terms of the years of service. This can be expressed as an increase in the amount of training per 1000 person years of service from 1.2 years to 2.2 years, an increase of 83%. As a result, admission to

**Stakeholder
Observations**

“Increasing credentials shrinks the pool available, delays readiness and increases the cost. I’m not sure that the process that we currently have is the best.”



the program would need to increase by over 8% and, assuming a constant cost per student year of training, expenditure per student by 66%, simply to 'stand still'. One stakeholder suggested that increasing the amount of hours taught in a day could be a solution. This would increase time for knowledge delivery while not increasing the number of months necessary for completion of a given program. However, given the content of many health professional programs, additional hours may not be feasible.

In addition to the years lost for additional training, it might be that increased training provides the individual with a wider range of alternative employment options (i.e., s/he becomes more marketable). In this case the average number of years each graduate contributes to the system might be reduced further as the probability of employment outside the health care sector increases. It is difficult to place numbers on this factor, but it is important to recognize that the above calculations represent conservative estimates of the impact of extending the period of training.

However, the skills acquired by graduates of enhanced training programs might be sufficient to permit reductions in the needs for other health care professions (e.g., substituting highly trained nurses for fewer family physicians). If so, the reductions in training costs associated with the lower need for this type of provider must be offset against the higher costs of enhanced training programs. However, it is difficult to find evidence of enhanced training leading to a substitution between types of health care provider. Instead, the additional skills produced by enhanced training are more generally an add-on supporting improvements in either the quality or quantity of services provided or new developments in the way services are delivered (Richardson et al. 1998). Clearly such improvements need to be considered in the context of the additional investment in resources that they require.

To summarize, increasing the length of training results in a permanent reduction in the supply of providers and requires **both** increased expenditure per entrant to the program and an increasing number of admissions to the program in order to maintain the current supply of services. The levels of increases required will depend on the precise parameters of the extended training program and the prevailing context of education and training programs. For example, where admissions to programs have been reduced at the same time as the length of training has been increased, such as occurred in the training of family physicians, the impact on the stock of providers is even more severe (Chan 2002, The Standing Senate Committee on Social Affairs, Science and Technology 2002).

To date we have assumed that sufficient students will be available to fill the training programs. However, enhanced training might impact adversely on recruitment to the program for two reasons. Firstly, enhanced training might be associated with higher standards for entry to the program. As a result, the pool of potential candidates might change with the pool of potential entrants for enhanced training facing a different, and



potentially wider, range of alternative opportunities. For example, students with sufficient qualifications to enter a degree-level health professional program may also be qualified to enter a range of other degree level programs. As the required entrance qualifications increase, the competition for students is also likely to increase. Secondly, increasing the length of a training program increases costs of training to the student in terms of both the direct out-of-pocket costs of the program and the period of time a student must forgo earnings in the labour market. In this way the opportunity cost of the program to the student increases. Hence, the expected returns to graduation from the program (pecuniary and/or non-pecuniary) may need to increase in order to mitigate the opportunity costs.

Similar problems arise where continuing education is used to enhance or upgrade skills. Despite opportunities for continuing education being an important strategy in recruitment and retention among health professions, they involve both direct costs and the reduction in service delivery. Lack of funds for the former, and lack of replacement staff for the latter have been noted as barriers to continuing education (Fujitsu 2002).

The issues surrounding the increase of credentials are some of the most contentious in the current HHR debate. It was a key issue discussed by many of the stakeholders. Both sides feel that they have legitimate reasoning for their positions. Some suggest that a greater examination into the need of increasing credentials is required. They also shared that increasing credentials could be justified if they resulted in enhanced patient and system outcomes. Others felt that there needed to be much more communication between funders, educators and providers. They felt that since increasing credentials impacted many players, all stakeholders should have a say in the process.

It is clear from the debate that some solution needs to be reached to alleviate this tension between the various health service providers and the different levels of government. There is a clear and pressing need to establish criteria that will help separate justified educational enhancements (together with appropriately commensurate credentialing) from purely arbitrary and unwarranted credentialing standards.

The Federal/Provincial and Territorial Ministries of Health and Ministries of Post-Secondary/Advanced Education (2004) have recently developed a set of principles to manage proposals for changes in entry-to-practice credentials. The new Entry-To-Practice (ETP) Credentials review process will consist of a mix of reviewers including academics, employers, and health

**Stakeholder
Observations**

“It is acceptable if the increased credentials are producing higher quality professionals. But we need to see a link between the increasing credentials and the necessity from the service aspect.”

professionals. Therefore, it is argued that both the make up of the review team and the criteria for review will make the process a comprehensive and objective one.

Governments have determined that issues requiring work in this area include: 1) the relationships with the legal/regulatory environment surrounding organizations involved or impacted by ETP credential changes; 2) the introduction of new educational programs at a higher academic level with subsequent elimination of the lower level program; and 3) the need for evidence to support the analysis of requests for ETP credential change (including the data and evidence of the economic impacts of ETP credential changes). While this “pan-Canadian” process expresses an attempt to establish criteria for evidence-based decisions regarding new entry-to-practice requirements, it should also be noted that it will be beyond the reach of many “emerging” professions to provide the required evidence. This is because they are either too small and under-funded to commission the required studies, or lack the research capacity within their ranks to conduct it for themselves (the “catch 22” is that they will not be able to develop the required research capacity until the educational standards are enhanced, but the educational standards will not be enhanced until they are able to provide the requisite evidence).

Many stakeholders interviewed in this study stressed that dialogue regarding increasing entry to practice credentials must occur among departments of health and education, universities, colleges, licensing bodies, and professional associations. These changes must be driven by changes in the needs of populations and driven by system changes. One stakeholder reinforced that “increased education may be a waste of time in certain scenarios where the increased education/training is not required. Competencies should be at different levels – licensing bodies should have various ‘stepping out’ levels from which professionals can enter the workforce - then employers can hire individuals at the skill level required.” This suggestion may serve as a start to resolving the credentialing conundrum. If legitimate credential increases can be separated out, the benefits to patients may be realized while keeping the discussed costs to a minimum.

**Stakeholder
Observations**

“I am not opposed to increasing credentials – but there have to be options because you don’t necessarily need the increased education/training for all situations.”

It would be incorrect to suggest that there are not challenges associated with increasing ETP credentials. At the same time it would be unwise to say such increases should not be considered just because of these challenges. Part of the problem is that proposals to increase ETP credentials often do not provide cogent evidence of the anticipated benefits.



The pan-Canadian ETP Credentials review process mentioned in this chapter should help to address this situation.

Summary:

It is clear that the issue of entry-to-practice requirements is one of the most controversial. Both sides feel that their arguments have a great deal of merit. It appears that there is evidence to support both sides of the argument. There is beginning to be a body of evidence which suggests, for example, that baccalaureate prepared nurses have a more positive impact on patient outcomes than their college trained counterparts. Conversely, however, there are increased system costs by delaying entry-to-practice because of increased educational requirements.

Stakeholders on both sides commented that increasing entry-to-practice requirements would be supported if they provided legitimate improvements to patient, provider, and employer and or system outcomes. The new Entry-To-Practice (ETP) Credentials review process may help to alleviate some of the conflict. By consulting relevant stakeholders and examining outcome indicators, it is hoped that legitimate entry-to-practice increases will serve to enhance PHC for all Canadians.

Chapter 4: Certification, Licensure and Scope of Practice

There appears to be growing concern within several health care jurisdictions that existing policies and practices related to the regulation of health professions present barriers to desired change and positive outcomes in the system (Tomblin Murphy & O'Brien-Pallas, 2002). Further, although initial licensure exams in the health occupations attest to the knowledge and skills required to provide minimally safe care, there is debate as to whether licensure should confer a lifelong "ticket to practice" (Gray, 1998 in Cary, 2000; Whittaker, 2000).

Certification has also arisen as an issue due to the increased specialization in health occupations that has taken place in recent decades (Beitz, 2000). Changes and technological advances in health care in the past 20 years have increased the demand for specialization within several health care provider groups (Joel, 2002; Stevens Barnum, 1997). Certification/registration is a level of regulation which affords title protection to individuals who meet specific qualifications; it may be used for credentialing by government or non-government associations that have established professional competence requirements that a person must meet to use the designation (Flook, 2003).

In some contexts (e.g., nursing), certification is used to document distinctive levels of practice preparedness following general professional licensure/regulation (Cary, 2000). This credentialing process is often voluntary and is undertaken to signify completion of a program of learning in which additional knowledge and skills related to a specific area of "specialty practice" have been obtained (Beitz, 2000). There are few extant studies that explore the relationship between certification in specialty practice areas and patient, provider or system outcomes (Holcombe, 2003; Cary, 2000). In the absence of clear empirical evidence that current educational, competency or certification requirements create a real barrier to meeting population health needs, approaches that involve significant change to current policies and practices should be undertaken only with widespread discussion and consensus among relevant stakeholders (Tomblin Murphy & O'Brien-Pallas, 2002).

Scopes of Practice

There is a widespread perception that the existing structures for professional regulation, particularly legislated scopes of practice create an unnecessary barrier to the development of a more integrated health care system in general and to interdisciplinary practice in particular (Lahey & Currie, 2004). A critical examination of the scopes of practice of regulated health professions by several provinces is contributing to the view that current scopes of practice protections are framed in overly exclusive and restrictive terms. Romanow (2002) also commented on the long-standing tradition of carefully guarded scopes of practice and its relationship to primary health care reform (Royal Commission



on the Future of Healthcare in Canada, 2002). Governments and health care CEOs are increasingly citing scopes of practice and traditional professional boundaries as impediments to their efforts to improve health care delivery; and claim that an alternative system of jurisdictional regulation and bureaucratically mandated scopes of practice with fewer reserved acts would help them design and implement more effective systems and ensure adequate supplies of the right level and mix of provider.

There is, however, little in the way of empirical evidence to support this position (Tomblin Murphy & O'Brien-Pallas, 2002; Lahey & Currie, 2004). While the relevant literature often mentions scope of practice issues and regulatory barriers as possible inhibitors to health care, this is done with little explanation of the precise role they play in this regard (Lahey & Currie, 2004). Despite the lack of supportive evidence, governments are looking closely at creating new health professions regulatory models based on broad, non-exclusive scope of practice provisions which reserve only those acts which present a significant risk of harm (Government of B.C., 2003).

Another issue related to scope of practice is the growing overlap in scopes of practice among health professions, and the confusion and tension this appears to be creating. There are currently more than 30 “regulated” health professions in Canada (Armstrong & Armstrong, 2002) with distinctive, yet often overlapping roles. There are also a number of new and emerging health professions, and the emergence of these other new, highly trained occupations will require an ongoing reassessment of the scopes of practice of existing health care providers and a re-balancing of the mix of skills among the various providers (Romanow, 2002). It is likely that the more the health care system in Canada changes, the more traditionally accepted scopes of practice will be challenged.

As scopes of practice continue to evolve for all health professionals, and as disciplines begin to work to their full scope of practice, there should be a greater acceptance of the boundary blurring within and across the professions (College of Registered Nurses of Nova Scotia, 2003). Changing scopes of practice will nonetheless be a challenge as there are existing tensions between and among health care professions that are complicated by union contracts and issues related to self-regulation. There is, however, mounting evidence for positive patient, provider, and system outcomes associated with multi-skilled workers, higher ratios of Registered Nurses working in advanced practice roles, and baccalaureate preparation (Horrocks, Anderson & Salisbury, 2002; Needleman, Buerhaus, Mattke et al., 2002).

Stakeholder Observations

“When considering other allied specialties, very few come out of school working with complex groups of patients – yet all patient populations, across the spectrum, must be served by competent health care providers.”



Issues of scope of practice are further complicated by failure to properly differentiate between professional scope of practice and scope of employment. Scope of practice refers to the range of roles, functions, responsibilities, and activities which members of a discipline are authorized to perform. In contrast, scope of employment refers to the range of roles that are defined through job descriptions, policies and procedures, orientation processes, education and evaluation (College of Registered Nurses of Nova Scotia, 2003). Inconsistencies between these two domains result in some health professions being unable to practice to their full professional scope, and make it difficult to integrate advanced practice roles in some organizations. For example, respiratory therapists are trained to intubate patients and to draw arterial blood specimens as part of their basic competency requirements, yet in some jurisdictions and institutional settings they are prohibited from performing these tasks.

Scopes of practice and the reserving of specific acts are best considered in the context of what has been said in Chapter 2 of this report about competency-based education. It may be helpful to consider these issues using the more inclusive language of “shared competencies” rather than the exclusive language of “restricted acts” and “scopes of practice.” Again, a detailed assessment of professional competency profiles would seem a rational starting point for continued dialogue on these issues.

Health Professions Regulation (Controlled Acts Model)

Across Canada there is a wide disparity in how health professions are regulated and the extent of legislative protections and professional autonomy. In general, the difference is between jurisdictions that use traditional models of licensure and/or certification, and those that have adopted a controlled-acts model. Each model is thought to offer certain advantages and challenges. In each case the notion of public protection is central. Under licensure, legislation prohibits all who are not licensed from providing the services that fall within the scope of practice of that profession. Under certification, the legislation contains no such prohibition. The function of the scope of practice in certification models is limited to authorizing members of the regulated health profession to provide services that fall within it. Whereas licensure provides a legislated monopoly to members of a regulated profession, certification provides only a competitive advantage (Lahey & Currie, 2002).

The controlled acts model is similar to certification in that the function of each scope of practice is to enable the provision of designated services by a particular group rather than to prohibit the delivery of the service by others (Lahey & Currie, 2004). Overlap between and among scopes of practice is an accepted and valued aspect of the model. A list of “controlled acts” is used to restrict those acts which pose a significant risk of harm to patients/clients to members of a regulated profession that has been authorized (under the legislation) to perform the act(s) in question (Lahey & Currie, 2004).



In a recent (2004) proposal for legislative change, the Province of Nova Scotia cites challenges with the existing licensure model which have to do with its profession-centredness, needless rigidity around scopes of practice, higher costs, and the perception that it is a barrier to effective HHR planning. The current licensure model is also linked anecdotally with difficulties in coordinating policy direction, the lack of prescribed criteria for decision-making, the volume of legislative items, and issues with accountability. Each of the perceived inadequacies with the current model in Nova Scotia lack empirical support and require further investigation, and widespread consultation with affected stakeholders.

The impetus for the move to a controlled-acts model in Alberta, Ontario and British Columbia has been the previously cited perception that legislated scopes of practice are a significant barrier to the development of collaborative and interdisciplinary practice (Lahey & Currie, 2002). Existing legislation governing the health professions is seen to create persistent jurisdictional disputes and a distinct lack of cooperation among the health professions (Epstein, Kazanjian, & MacAulay, 2000). Provinces, including Nova Scotia, are exploring the notion of creating a controlled-acts model under what is commonly referred to as “omnibus” or “umbrella” legislation. Umbrella legislation is a single statute under which all relevant existing health professions regulations would be subsumed. Such legislation would include a set of policy principles; prescribe a process for determining the regulation of new and emerging health professions; and deal with scopes of practice in a coordinated manner (Government of Nova Scotia, 2004).

While it is too early to assess adequately whether the umbrella legislation implemented in Alberta, Ontario and British Columbia has resulted in the desired outcomes, it is important to stress that a controlled-acts model alone will not facilitate interdisciplinary practice. The barriers to interdisciplinary practice are not only regulatory in nature. As pointed out in Chapter 2 of this report, there are numerous variables that inhibit interdisciplinary work, including a tendency to focus on the many barriers to, rather than the opportunities for, such work.

Stakeholder Observations

“How do we respond to and participate in discussion around scopes of practice? The goal must be to better meet needs of system. Legislation that has protected acts allows for a huge amount of activity by people that are not qualified. Health profession legislation should provide general guidance on the scope of practice; the rest should be based on the educational accreditation process.”

Summary:

The varying structures for professional regulation are often perceived as barriers to improvements in the PHC system. Many argue that traditional guarded scopes of practice prevent or severely inhibit the development of interprofessional teams. Some feel that reducing the number of reserved acts would provide benefits for all users of the health care system in Canada. There is little evidence, however, to support this position. While this issue is often raised when discussing health care barriers, there is no clear picture of its precise role.

Governments are pursuing many options to deal with professional regulation including umbrella legislation which would work closely with profession specific acts. Alternatively, there are a number of competencies which various professions share. A clear examination of this overlap may be an effective means for addressing the challenges of certification, licensure, and scope of practice.



Chapter 5: Recruitment and Retention of Students and Faculty

In this chapter recruitment refers to the acquisition of students into health education/training programs which will lead them to a degree or diploma in a health discipline. Retention refers to both the ability to retain students within the program (i.e., minimize attrition) and retain graduates following completion of their educational programs. Both recruitment and retention are critical to producing a sufficient supply of health professionals in the Atlantic Region.

While not central for the educational programs, retention of graduates in the Atlantic Region once educational responsibilities are complete is of critical importance and clearly influences the workforce supply. If there is a large amount of out-migration of newly minted health providers from the Atlantic Region, then the cost of educating health professionals is shouldered by the region while its supply of such professionals continues to be threatened. The result is an increased demand on the educational system to produce an increased number of health professionals.

Enrolment Policies and the Aging Workforce

Admission rates to health provider educational programs are in large part a function of the success of recruitment efforts into a particular profession. A prospective student's interest in the health care field will typically precede their selection of an educational program or institution. Individuals are unlikely to enroll in a health professional education program if they perceive little opportunity in the employment sector, and can be affected by such factors as continued labour strife and continued media attention to health care cutbacks.

It has been noted that there is often a disparity between published admission requirements and what it actually requires to gain admission to a particular program (HCHRSC, 2003). Some students are faced with the specter of requiring a first degree for admission that leads to what has been called a "double degree/double debt" problem for students. This may act as a disincentive for students who would otherwise consider entering a health profession. Typically, however, the disparity between actual and published admission criteria reflects competition for a limited number of seats in health care education programs. High demand is associated with high admission standards. During periods of low demand admission standards drift downward toward published minimums.



Anticipated demographic trends have the potential to impact the number of young people available for recruitment into health care professions. For example, overall negative growth is expected in the Atlantic Region over the next decade in the 18-21 year age group; this is the cohort from which most post secondary enrollment has traditionally been drawn. In addition, the traditionally high proportion of enrollments of female students which have sustained the overall enrollment growth in health related programs is beginning to level off as young women increasingly enter other professions (HCHRSC, 2003).

Strategies used to attract young people to health professions include “career fairs” for high school students, and financial incentives including lowered tuition and scholarships. Work is being done with guidance counselors to provide them with the entry requirements for different health professions. They in turn can provide early guidance to students in high school.

As mentioned by some of the stakeholders, a new initiative “Access to Success” has been implemented in Newfoundland and Labrador. This initiative requires students to complete an awareness inventory and begin early on to take responsibility for their own education. In addition, a recent strategy in Nova Scotia, funded by Health Canada, is the development of career advisement materials on allied health professions appropriate for grade nine students. There are several health disciplines that, by virtue of their work, are not visible to the general public and therefore not readily recognized as possible careers (e.g., Med Lab Techs, Nuclear Medicine, etc.) The target populations for a pilot delivery in 2006 will include several rural, urban and First Nations' schools in Nova Scotia.

Enrollments in many programs for health professionals declined over the mid and late 1990s. As a result, the expected future flow of new health professional graduates is less than at previous times (O’Brien-Pallas et al, 2003). For example, the Newfoundland and Labrador report notes that the proportion of new graduates in the registered nurse workforce fell from 5% to 3.2% over the 1990s. An increase in the number of seats in 2002 together with reduced rates of attrition means that this trend is expected to be reversed. In 2005, however, the contribution of new graduates is anticipated to remain under 4% (Newfoundland and Labrador Report, 2003).

Stakeholder Observations

“There has been and will continue to be a significant decline in high school graduates. This will have an impact on enrollment.”

Stakeholder Observations

“Begin recruitment in grade school or as early as possible before students make career decisions.”



Increased enrolments, however, are not anticipated to offset retirements from the provider stock in the near future. The baby boomer bulge approaching retirement age will have a significant impact on the stock of HHR. A substantial number of individuals are leaving the workforce at age 55 as a consequence of early retirement policies. These policies were implemented in the mid to late 1990s to reduce the future workforce because of health care restructuring. This is particularly apparent in the nursing workforce but has impacted other professional groups as well (O'Brien-Pallas & Baumann, 2000). According to the New Brunswick Task Force on Physician supply, despite recent increases in enrolments at Canadian medical schools, by 2008 retirements among physicians will exceed the number of new graduates (Fujitsu, 2002).

Even after allowing for losses to early retirements, substantial proportions of the health care workforce remain concentrated in the older age groups. For example, in the New Brunswick HHR inventory database, 40% of individuals in 2002 were age 45 or over (Fujitsu, 2002). In both Nova Scotia and PEI, half of the registered nurse workforce is either eligible for retirement or will become eligible in the next 10 years (Health Human Resources Sector Council, 2003; Atkinson, 2001). In addition, over one third of all physicians in Nova Scotia are 50 or older. A recent national study found that more than 70% of all nursing groups were 40 years or older, confirming that age distribution will be a challenge in the very near future (O'Brien-Pallas, Tomblin Murphy, et al., 2004). While the retirement age is increasing for many health professions, the proportion of people 40 or older will lead to a greater retirement rate even if an increased retirement age delays its arrival.

Based on actual simulation of the nursing workforce, adding new seats is not the only strategy for success. It is also necessary to retain nurses of all types in the workforce beyond early and even normal retirement age. Nurses in Newfoundland and Labrador are the youngest of any age cohort in nursing groups. Therefore, the impact of the demographic shift in Newfoundland and Labrador will be felt a little later than the other Atlantic Provinces (O'Brien-Pallas, Tomblin Murphy et al, 2004). Nurses and physicians are not the only occupational groups to experience a demographic shift. Most health service providers will experience similar challenges in the near future.

To address the increasing shortage of providers, decision-makers have looked to increase supply through increasing the capacity of local training programs as well as purchasing additional seats in training programs in other provinces. Enrolments in many training programs have now generally increased across all provinces in Canada. The rates of increase have varied among programs and professional groups but there is a time lag between entry to program and graduation. This time lag is exacerbated with any increases in the lengths of training programs. For example, the training program for nurse practitioners in Newfoundland and Labrador was increased from 12 months to 16

months in 2000 leading to the program producing no graduates in 2001 (Newfoundland and Labrador Health Boards Association, 2003).

Consistent with the cutbacks in the 1990s, care delivery programs and educational programs also saw reductions in their budgets. This resulted in fewer seats in the educational programs until early 2000. Seat enrollments in many health professional programs have since increased.

Program Attrition Rates

While seats may have increased in the past few years, attrition rates during any year of the program result in a reduced number of graduates produced. A few stakeholders indicated that some health programs do not have screening criteria for program entry that would predict completion of the program. This, in part, accounts for the high attrition rates from some programs. The retention of students in programs is critical to maintaining a robust stock of individuals who will form the future supply of health professionals for the Atlantic Region. When programs lose a significant percentage of their students prior to graduation this does not add to the supply of new professionals in the local labor markets. One stakeholder noted that the greatest losses in health programs occur in the first few years but level out by the final year.

Getting reliable attrition data has been challenging in many Canadian provinces because of differences in definitions of how attrition is reported by schools and, in some instances, the lack of a centralized database where such information can be readily accessed. This requires researchers to go to each educational facility for the required data. There is no guarantee that these data are reliably and consistently collected at each location. These data, if accurate, would allow the monitoring of trends over time. It would also allow researchers to identify patterns that occur in different programs in response to the broader environment in which health care is delivered.

Stakeholder Observations

“HHR planning is an ongoing iterative process and not just something that can be dealt with on an ad hoc basis at election time.”

“During election periods politicians make big promises about enhancing educational capacity yet when the day comes they do not follow through on their promises.”

Stakeholder Observations

“Better screening methods for incoming students may reduce high attrition rates from programs.”

“We do not have any problems in either recruiting or retaining students in our health professional programs. The demographics of our student population is getting more mature so we do not see the attrition rates often associated with students just out of high school.”



Out-Migration of New Health Professionals to other Provinces and Countries

If permanent full-time positions are not available to new graduates and/or the work arrangements do not meet the needs of the new professional then individuals may leave the provinces/region for other areas in Canada or other countries. In a recent study completed as part of the nursing sector study, Bauman et al, (2004) identified that Newfoundland and Labrador and Prince Edward Island retained the lowest percentage of RNs at 72.6% and 69.7 % respectively, while LPN out-migration from the Atlantic Region was not known. New Brunswick, however, had one of the highest retention rates of nurses educated in that province (92.6%) in Canada. This is in stark contrast to the situation for physicians. There is no medical school in New Brunswick and as a result, the government purchases seats from training programs in other provinces. However, only 35% of graduates of these New Brunswick funded seats are working in New Brunswick two years after graduation (Fujitsu, 2002).

Environmental scan stakeholders noted that when students go outside the provinces to obtain their education, they will often stay there or go elsewhere without returning to their own province. Return-of-service bursaries are one way of bringing students back. Strategies such as summer work programs in their home province have also had some success in retaining students in their province of origin.

For most professionals the greatest recruitment success is in-province education. When training programs are offered in the province and region of potential employment, the out-migration of personnel can be reduced if full-time, worker-friendly jobs are available. An Atlantic Health Region initiative is currently under development by the Departments of Health and Community Services and Post Secondary Education (Newfoundland and Labrador Health Boards Association, 2003). The goals of this initiative is to consider capacity to increase enrollments by province, and to examine issues such as the ability to share programs, program funding, faculty recruitment, infrastructure, and clinical capacity including viability of preceptor programs.

Stakeholder Observations

“One idea is to have student nurses earn seniority for work that they do before graduation. They will be covered by the union and be assigned to a unit rather than an individual nurse. This might make them more willing to work after graduation because of earned seniority and rapport with the staff.”

“There is a need to provide education as close to where an individual will be practicing as possible.”



Participation Rates of those Professionals who Remain in the Workforce

One of the factors that may have an impact on the retention of health professionals in the Atlantic Region is the availability of full-time positions in areas where the new and current professionals wish to practice. Even when full-time positions are available, nurses and physicians express concerns about their ability to take on the workload demands (Canadian Labour Business Centre, 2003; O'Brien-Pallas et. al, 2003; Baumann et al, 2004).

The essentials of a quality work environment must be addressed if we want to recruit health professionals and retain them in the health care system. These essentials include manageable workloads for all groups, the human and non-human resources needed to be able to get the job done, opportunities for rest and relaxation with family or significant others, support from management in the decisions made by practitioners, praise for a job well done, constructive feedback when there is need for improvement, and adequate reimbursement that is comparable with others in similar disciplines across Canada (Baumann and O'Brien-Pallas et al, 2001).

Stakeholder interviews highlighted the need to make the work environment pleasing in order to attract and retain health professionals in the workplace. In order to do this there needs to be an investment in a culture of change.

Employer expectations of health personnel need to be balanced with education program content to ensure that there are no false expectations on anyone's part once a student enters the workforce. There needs to be community-driven and employer-driven recruitment strategies.

Faculty Availability

Just as the workforce of health professionals is aging and retiring, so are those who prepare health professionals. The Newfoundland and Labrador report notes that in 2003, 53% of the nursing faculty was 45 years of age or older (Newfoundland and Labrador Health Boards Association, 2003). This is causing potential limitations in the ability to expand programs that prepare future health professionals.

Some stakeholders noted that finding faculty is very difficult, and that the best students get snatched up for senior management positions in the practice environment. The best

Stakeholder Observations

“Enhance the work environment by reducing the work demands on a daily basis, providing strong leadership, functional equipment, time for meals and coffee breaks, reduce overtime, provide access to ongoing education.”



solution for Newfoundland and Labrador, New Brunswick and Prince Edward Island has been to “grow their own” faculty. A new PhD nursing program is being considered in Newfoundland and Labrador, which should help expand the professoriate. However, the biggest problem may well be space and support (both research dollars and staff support) in order to retain faculty in the programs.

Many stakeholders commented that faculty should do rotations through different work areas to keep clinical skills current. Others suggested joint appointments for faculty between University and clinical work areas. They stress that faculty not lose sight of the reality of the workforce environment. While these are important issues, University guidelines for promotion and tenure stress the importance of research and publication. There will always be a tension between research and teaching and clinical relevance as long as promotion committees use the accepted measures for assessing movement through the ranks.

Summary

The anticipated demographic trends in Atlantic Canada point to a decrease in the number of students entering health education programs. They also point to a possible increase in the number of health providers leaving practice through retirement. Additionally, there is also a trend of students leaving the Atlantic Provinces once they have completed their programs.

There are a number of ways to address these potential challenges. Health education can be introduced to students at a younger age thereby encouraging them to pursue health education once they have completed high school. Programs to encourage graduates to stay in the region have been developed and are presently being implemented. It appears that the most successful approach is to train students in their home region. What is evident is that something needs to be done. As the exit rates begin to surpass the entry rates, the viability of PHC in the Atlantic region may be undermined.

Stakeholder Observations

“There is difficulty in hiring clinical faculty because the clinical component is in 5 week blocks. We are looking at options of clinical placement 1-2 days per week to aid this problem.”

Chapter 6: French Language Health Service Delivery

A key health care issue in the last decade has been access to French language health services. In 1998, la Fédération des Communautés Francophones et Acadienne (FCFA) commissioned a study on health in Francophone and Acadian communities. The study found that in many of the communities there was a shortage or complete absence of French speaking health care professionals and that the availability of services was influenced by a range of demographic, educational, social and historical factors (FCFA, 2001). In 2000, the FCFA further identified that key challenges in providing access to French language services included a difficulty in recruiting and retaining staff in rural or outlying areas and a weak community involvement in bringing the professional to the community (FCFA, 2001).

The Federal Minister of Health established the Consultative Committee for French Speaking Minority Communities (CCFSMC) in 1999 to provide advice on strategies for the development of the official language minority communities. The CCFSMC produced a report to the Federal Minister of Health on an overview of the health care situation for Francophone minority Canadians in 2001. The report indicated that at present, there is a difference in the level of health care services available between Francophones and Anglophones. For example, the aging of the minority francophone population suggests that the need for French language health care services is going to increase more than the Anglophone population. Furthermore, in 71 community studies, health care services were three to seven times more accessible in English. Almost 50-55% of Francophones have little or no access to health care services offered in their mother tongue (CCFSMC, 2001)

As a component of the larger report, the FCFA coordinated a study for the CCFSMC on improving access to French language health services. The essential focus was to improve access in French to PHC. The study called for the implementation of five levers of intervention (FCFA, 2001):

- Networking,
- PHC,
- Use of technology,
- Availability of information, and
- Training of health professionals.

A key finding from the FCFA study was the correlation between the quality of health care and the ability of the health professional to assist, advise, guide and educate the service users. Thus, the ability to understand and to be understood is an essential component of any relationship between health professionals and health services patients and clients.



Further, language barriers have been linked to the following (FCFA, 2001):

- Reduction in the use of preventive services;
- An increase in amount of time spent on consultation, number of diagnostic tests ordered, and probability of confusion;
- Greater influence on service quality (e.g., mental health services - wherein effective communication is crucial);
- A decrease in compliance with treatment; and
- Reduction in satisfaction with care and services.

A key driver of access to French language health services is the availability of French speaking health professionals. The supply of these professionals is clearly dependant on the education and training programs available to them.

Francophones in Canada

Francophones live all across Canada, however their population size and concentration varies between provinces and even communities within these provinces. Table 3 summarizes the percentage of Francophones (defined by those who speak French at home on a regular basis) by province in Atlantic Canada (Statistics Canada, 2001). It is clear to see that of the 13% of Francophones in Atlantic Canada, the largest population and highest concentration exists in New Brunswick. Beyond these figures, there is little reliable information that is applicable to these minority Francophone communities.

Table 3: Population Percentage of Francophones by Province in Atlantic Canada.

Province	Total Population	Francophone Population (French spoken at home on regular basis)	Percentage
New Brunswick	719,710	245,500	34%
Newfoundland	508,080	2,975	1%
Nova Scotia	897,570	33,675	4%
Prince Edward Island	133,385	5,190	4%
Total	2,258,745	287,340	13%

In targeting both French and English linguistic minority communities across Canada, the Federal Government passed the 1988 Official Languages Act. The Act provides for equal status, rights and privileges for both French and English in federal institutions; supports the development of English- and French-language minority communities to encourage the acceptance and use of both English and French in Canadian society; and establishes the powers and duties of federal institutions in the area of the official



languages (Official Languages Act – In Brief, 1993). The Act has been a driving force in ensuring that services in French are available to minority communities – health services being a major focus.

In addition to the national Act, each province may be subject to a provincial French language service policy. Since each province governs their health care system, the influence of their provincial language policy is vital in examining access to French language services. As of January 2005, New Brunswick is the only province that is officially bilingual. Prince Edward Island and Nova Scotia have a policy on French language services, but the policy is a general policy with no particular reference to health services. Newfoundland and Labrador does not have any policy on French language services.

Identified Challenges for French Language Training Programs

A report released in December 2002 by the Standing Senate on Social Affairs, Science and Technology identified three major challenges in meeting the education/training requirements to enhance and sustain French language health services. First, the number of enrolments in the French health education and training programs currently is insufficient to meet the needs of the francophone communities. Second, even if enrolment numbers increased, the problem would not be rectified. Many young people migrate to large urban centres which exacerbates the problem in many of the rural francophone communities. It has been noted that students do not tend to return to their community to practice if they move to an urban centre for their education/training. The programs tend to be offered in the urban centres with very little community outreach. Finally, there is an imbalance in the availability of these health programs. Most of the health education/training programs are offered in Quebec and Ontario. Western provinces provide very little access to programs offered in their region. Although there are some programs offered in New Brunswick, further advancement can be made in Atlantic Canada.

French Language Health Education/Training Programs and Initiatives

The number of French language programs offered across the country are limited and, as just mentioned, concentrated in Quebec and Ontario. In 1999, the Consortium National de Formation en Santé (CNFS)² was established to facilitate access for students to these health science and medicine programs across Canada. Currently, the membership consists of ten Canadian francophone minority institutions at the university

² Formerly Centre national de formation en sante



and college level across Canada that offer French language health education/training programs. These programs are listed in Table 4 and 5. The CNFS implements strategies to recruit and train future health professionals and does so by trying to tailor these programs to the needs of their communities. The CNFS does this by ensuring that the appropriate intake infrastructure begins at the community level to accommodate the needs of potential students. Affiliated with the University of Ottawa, the CNFS has been instrumental in not only creating a decentralized training network for Francophone students, but also in developing partnerships in clinical training with the Montfort Hospital in Ottawa, as well as in the students' own communities. In fact, by 2002, the CNFS enabled over 150 Francophones outside of Quebec to participate in clinical training opportunities in their communities. CNFS continues to provide opportunities for Francophone students (Standing Committee, 2002).

**Stakeholder
Observations**

“New Brunswick has just started up a dedicated francophone program in Moncton with the New Brunswick Community College in Campbellton and the University of Moncton.”

An Action Plan for Official Languages was developed in 2003 that awarded minority Francophone and Anglophone communities \$119 million over five years for training, recruitment and retention of health professionals; networking; and primary health care (Dion, 2003). Training, recruitment and retention received a share of \$75 million, of which \$63 million was given to the CNFS to help alleviate the shortage of French health professionals, increase French language health training capacity and help ensure that future practitioners can work in their own language and in their communities of origin. This is expected to be accomplished through better access to programs through mediated and distance teaching and by strengthening universities and colleges that serve francophone communities (Dion, 2003).

Table 4: French Language University Health Education Programs Offered at Francophone Minority Institutions (modified from CFNS, 2005).

Universités	Ottawa	Moncton	Laurentienne	St - Boniface	Sainte-Anne	Faculté St-Jean	Entente Qué/NB
Baccalauréat							
Ergothérapie	▲						▲
Nutrition		▲					
Physiothérapie	▲						▲
Psychologie	▲		▲				
Sage-femme			▲				
Sciences de la santé	▲				▲		
Sciences de l'activité physique / Kinésiologie	▲	▲	▲				
Sciences du loisir	▲						
Sciences infirmières	▲	▲	▲	▲		▲	
Service social / Travail social		▲	▲				
Sciences de laboratoire médical		▲					
Techniques radiologiques		▲					
Thérapie respiratoire		▲					
Certificat							
Infirmière et infirmier praticien	▲		▲				
Certificat - Double concentration							
☛Gérontologie	▲						
Post-diplôme							
☛Sciences infirmières			▲				
Maîtrise							
Audiologie	▲						
Nutrition		▲					
Orthophonie	▲						
Pharmacie							▲
Psychologie		▲	▲				
Sciences de l'activité physique	▲						
Sciences infirmières	▲						
Sciences infirmières - infirmière ou infirmier praticien		▲					
Service social / Travail social	▲	▲	▲				
Médecine							
1er cycle	▲						▲

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Universités	Ottawa	Moncton	Laurentienne	St - Boniface	Sainte-Anne	Faculté St-Jean	Entente Que/NB
Doctorat							
Psychologie		▲					
Psychologie clinique	▲						

Table 5: French Language College Health Education/Training Programs Offered at Francophone Minority Institutions (modified from CFNS, 2005).

Études collégiales	Cite	Boreal	Campbellton	St - Boniface	Sainte-Anne
Programs					
Aide en santé / Préposé aux services de soutien personnels	▲	▲	▲	▲	
Aide physiothérapeute	▲	▲			
Conseiller en service à la personne					▲
Études en loisirs		▲			
Formation en services funéraires		▲			
Hygiène dentaire	▲	▲			
Infirmière auxiliaire / Soins infirmiers auxiliaires	▲	▲	▲		
Massothérapie		▲			
Pré-sciences de la santé		▲			
Santé et services de soins continus					▲
Sciences infirmières		▲		▲	
Services à la personne					▲
Soins ambulanciers paramédicaux	▲	▲			▲
Soins ambulanciers paramédicaux avancés					▲
Soins dentaires		▲			
Soins palliatifs	▲		▲		
Sciences de laboratoire médical			▲		
Techniques d'éducation spécialisée	▲				
Techniques pharmaceutiques		▲	▲		

Études collégiales	Cite	Boreal	Campbellton	St - Boniface	Sainte-Anne
Techniques radiologiques			▲		
Technologie en radiation médicale		▲			
Thérapie respiratoire	▲		▲		
Travail social	▲	▲			
Travail social/gérontologie	▲				

With respect to Atlantic Canada, there are limited education/training programs offered in French. Of those offered, almost all are offered in New Brunswick. In addition, New Brunswick has existing agreements with Quebec for programs offered at the Universities of Montreal, Sherbrooke and Laval in programs such as audiology, occupational therapy, medicine, dentistry, optometry, speech therapy, pharmacy and physiotherapy.

Stakeholder Observations

“It is a challenge to get French trained nurses.”

In 2003, the Federal Government became directly involved with the Atlantic Provinces by funding a number of programs and seats in French health education and training programs until 2008-2009.³ For example, at the University of Moncton there was the creation of a kinesiology program and a nursing program. Funding was also increased to each of the provinces to increase the number of seat purchase agreements with institutions outside of Atlantic Canada. New Brunswick has historically had existing agreements with Quebec, therefore other Atlantic provinces are using New Brunswick as a hub to purchase seats for all of Atlantic Canada (Personal Communication: M. Pascal Robichaud, September 7, 2004).

Current Issues

Although these initiatives are in the right direction and seem promising, there are many challenges regarding their feasibility, success and sustainability. For example, the Federal Government funding previously mentioned may not be renewed after 2009. The challenge is that if a province accepts the funding, they may be left with the responsibility

³ There has been some suggestion that this funding by the Federal Government will be made permanent. However, there has not been confirmation that this is in fact the case.

of continuing after 2009 without any additional assistance. Some provinces may not be willing to accept the current funding because they are not able to make the commitment to maintain the increased number of programs and seats.

There are also challenges that arise from seat purchase agreements, most notably the difference in provincial health care systems. For example, the programs in which New Brunswick purchases seats in Quebec are based on Quebec's health care system. Although New Brunswick does try to fit their policies to accommodate Quebec's education/training system, at times this synchrony is not possible. This also leads to the incompatibility of programs with respect to provincial credentialing requirements.

Specific to Atlantic Canada, the number of qualified students available to fill seats is declining because of the decreasing numbers of students going to francophone high schools. In New Brunswick, this number is expected to decrease by 20% over the next few years (Personal Communication, M. Pascal Robichaud, September 7, 2004).

It is also difficult to retain minority francophones in their communities after they have been trained. Most minority francophones who pursue education in health care do not return to their community to practice. This may occur because of a combination of the limited number of programs available and the lack of clinical training partnerships with the smaller communities. This is intensified by the difficulty in finding francophone preceptors and providing continuing education programs, not only in the rural communities but also in the urban centres.

In an effort to address some of these challenges, the province of New Brunswick implemented very unique clinical education programs for family physicians, audiologists, occupational therapists, pharmacists, physiotherapists and speech language pathologists. The resulting network of on-site, clinical experiences within New Brunswick's health facilities, involving hospitals, out-patient clinics and other community settings, has helped in addressing this issue. As such, students enrolled in "out-of-province" health programs are exposed to New Brunswick's health system throughout the course of their training, while, at the same time, developing a sense of "belonging" to the New Brunswick health team.

Major intervention with respect to education and training programs have been identified through previous workshops, studies and consultations with key stakeholders (CCFSMC,

**Stakeholder
Observations**

"It is most useful to maintain contact with students and maintain contact with the province of origin while studying in Quebec- need to have them come back and do clinical rotations etc."



2001; FCFA, 2001; Personal Communication – M. Pascal Robichaud, September 7, 2004). The interventions can be summarized in four main categories:

- Community participation,
- Increased collaboration with institutions and organizations,
- Promotion of health professions and the health sector, and
- Recruitment and retention strategies.

Community Participation

The FCFA recognized that participation at the community level is the beginning and the end of any partnership project and health service is no exception. Recommendations were made to increase cooperation and partnership among francophone and Acadian communities and with partners in Quebec in order to achieve training, recruitment and French language service quality goals. Further, concrete community based projects and national initiatives need to be developed in order to bring health professionals back to the community. In this light, the practical training component needs to be expanded to provide training for students as close to their communities as possible. This type of program tailoring, as well as other methods including training with a community focus, may provide opportunities for these francophone communities. Incorporating financial incentives to settle in francophone communities may also encourage young students to explore French language health education and training.

Increased Collaboration with Institutions

Other key partners in promoting French language health education training programs are the educational institutions. The CNFS, as previously mentioned, has already begun efforts to decentralize professional training in health, and will continue to expand to encompass as many programs and institutions as possible. Increasing partnerships with universities in Quebec would also enhance the access to French language programs. These partnerships as well as networking among other health related organizations should provide a solid foundation to build the infrastructure necessary for French speaking health professionals.

The institutions can also incorporate some incentives in the education of French speaking students. Scholarships and fellowships recognizing French language may be one method to attract students into health professions. The stakeholders interviewed noted that some provinces were pursuing the idea of scholarships for French language students. Even within English language programs, an incorporation of communication skills laboratory sessions would be beneficial. This type of course is offered at the University of Ottawa and has proven to be very successful in training medical students to become effective communicators with a linguistic minority group (Drouin & Rivet, 2003). Although there

has not been follow-up on this study to see if the students will set up their practice in Francophone communities, it was clear to see that the educational activities designed to meet the societal needs were well received by the community, preceptors and students.

Promotion of Health Professions and the Health Sector

Creating awareness of the health sector and the types of professions that are involved in delivering health services is an essential factor in attracting students to a particular program. It is imperative to promote and enhance the prestige of health professions to students. It is also necessary that communities realize that the health sector is a key component of their economic development. By creating awareness, communities will be more likely to support the expansion of training programs into the communities based on the needs of the community and the students who wish to return.

Recruitment and Retention

Recruitment and retention to not only the program but also to the communities in which there is a need is a critical component that must be addressed when creating an infrastructure for French language health services. The training programs must give a student as much exposure to their home region as early as possible in their training program.

Recruitment and retention of qualified faculty and preceptors is another key component to this infrastructure. Without qualified, dedicated teachers, it is very difficult to create a solid teaching environment to address francophone communities. This point is developed further in the next chapter of this report.

Summary:

Access to French language health services in Atlantic Canada falls far behind access to English health services. Many communities are unable to support French language providers due to a lack of programs or clinical placements. Adding to this challenge is the fact that the majority of French language programs offered in the Atlantic region are offered in New Brunswick.

In 2003 the Federal government began to fund a number of seats and programs in French health education. The funding was to be in place until 2008-2009. There has been some suggestion, however, that this funding will be made permanent. There are a number of

Stakeholder Observations

“We need to look at how co-op seats are allocated. Presently language is not a determinant and names are drawn at random. As a result, the two French speaking nurses have ended up with Anglophone students.”



Trends and Issues in Health Education

other avenues that have been identified to promote French language health education. These include community participation, increased collaboration with institutions and organizations, promotion of health professions and the health sector, and recruitment and retention strategies. These initiatives will help to ensure greater access to first language health services for the nearly 300,000 Francophones living in Atlantic Canada.

Chapter 7: Education/Training for Underserved Rural Communities

Ensuring an adequate supply of health care providers for underserved, remote and rural communities (URR) is a challenge in many jurisdictions around the world (Strasser et al. 1995). Policies aimed at relocating providers to these communities from areas of relative over-supply have had only limited success (Barer and Stoddart 1991). The literature on addressing service shortages in URR communities has largely focused on physician services. Barer and Stoddart (1999) note that in the case of physician human resource policy, initiatives in the area of education and training have traditionally received little attention compared to financial incentives aimed at attracting and retaining physicians to URR communities. Yet as the same authors noted in their study of physician human resource policies in Canada (Barer and Stoddart 1991), the perception of stakeholders in the present study was that educational issues form the biggest source of the problem of service provision in URR communities. As there may be little support for the effectiveness of financial incentives, increasing attention has been paid to the education and training of new professionals in recent years.

Several aspects of traditional approaches to education and training have been identified that create barriers to providers choosing to practice in these communities.

First, as noted by McKendry (1999), training programs generally provide only limited exposure to URR communities. Moreover, where such exposure occurs, it is often presented only towards the end of those programs. At this stage, however, students may have already established clear preferences and plans for career paths.

Second, training programs often do not reflect the distinctive needs of URR communities (Hutten-Czapski 2001). The geographic, social, economic and cultural environments of URR communities give rise to particular epidemiological profiles of populations that may not correspond to the major health care needs of the larger metropolitan populations.

Third, as a result of the inadequate attention provided to URR populations and their needs in training programs, graduates often lack the skills and confidence for practicing in URR populations (Barer and Stoddart 1991, Wetmore and Stuart 1999).

Finally, entry-to-practice education requirements are often not based on the needs of populations. As noted in the Newfoundland and Labrador report (Newfoundland and Labrador Health and Community Services Human Resource Planning Unit, 2003) the trend towards specialization may increase the problems of recruitment and retention in URR communities with needs for 'generalists'.

The impact of these factors on the location decisions of new graduates is greatest where the approaches to funding service delivery are independent of considerations of population needs (Barer and Stoddart 1991). For example, in the UK National Health Service a funding formula that explicitly incorporated measures of need within populations was introduced for the allocation of hospital resources. However, access to hospital-based services is largely by referral from primary care providers (i.e. ‘gatekeepers’ to hospital-based services). Because resources for primary care services were not allocated on a similar population needs basis, but largely followed the location preferences of family physicians, access to hospital-based services remained ‘unequal’ relative to needs and created perceptions of hospital shortages in ‘low needs’ populations and hospital surpluses in high needs populations (Birch and Maynard 1987). As a result, PHC funding policies failed to support the needs-based resource allocation policies in the hospital sector. Therefore, policies aimed at influencing the location preferences of graduates should be supported by resource allocation and remuneration policies that support these preferences.

Factors Associated with URR Practice

The Romanow report (Commission on the Future of Health Care in Canada 2002) reported on a range of factors that have been found to be associated with a greater probability of providers choosing to practice in URR communities. These factors are based on an ‘evidence-based’ review of international experiences. They include:

Student recruitment:

Students who grow up or attend high school in a URR community are found to be more likely to choose a URR practice setting (Easterbrook et al. 1999)

Course content and design:

Factors associated with an increased probability of choosing a URR practice setting include frequent and early exposure to URR practice in a training program, streamed education aimed at developing ‘customized’ skill sets for URR practice, and a significant portion of graduate training in a URR community (Rolfe et al. 1995, Easterbrook et al. 1999, Pathman et al. 1999, Rabinowitz et al. 2000)

The introduction of clinical education centers in URR communities may provide greater exposure to the needs of

Stakeholder Observations

“There is evidence in Ontario (medicine) that 30% of those from rural areas go back to rural areas; only 10% of urban students go to rural areas.”



URR communities. It may also increase the application of skill sets to meet the needs of students in metropolitan colleges and universities.

There has been some progress in terms of implementing policies aimed at increasing programs directed at URR education. In British Columbia a Northern Medical Program with a first year intake of 24 students in 2005 has been established at the new Northern Health Sciences Centre in Prince George. Medical training in Alberta already involves a mandatory four week family medicine rotation in a rural area with further proposals to increase both recruitment to these programs from rural areas and exposure to these communities within the program (Alberta Rural Physician Action Plan Co-ordinating Committee 2003). Memorial University in Newfoundland and Labrador established a Northern Family Medicine Residency program in 1992 based on a 28 weeks rotation in the Northern part of the province (Jong and Beach 1997). Similar programs developed at McMaster and Ottawa Universities in Ontario have reported around 70% of graduates of these programs go on to practice in these communities (Commission on the Future of Health Care in Canada 2002). Ontario has also seen the opening of a new Northern Ontario Medical School as well as the development of an ‘offsite’ medical program in Windsor provided by the University of Western Ontario. The program is based upon the recommendations of the Expert Panel on Health Human Resources (2001).

Post training support:

The impact of these training-specific factors is greater where rewarding practice opportunities and career pathways are available to support URR practice. This is not restricted to the level, stability and security of income and career development but also includes support for the provider to pursue a ‘balanced’ lifestyle in terms of professional, personal and family responsibilities (Strasser et al. 1995, Commission on the Future of Health Care in Canada 2002).

These factors are generally supportive of the more comprehensive and detailed list of strategies proposed by the World Organization of Family Doctors (WONCA) (Strasser et. al.1995) as a means to improve rural health services.

**Stakeholder
Observations**

“We are finding that many do not want to work in rural areas because there is no opportunity for continuing education - still an issue even with internet, email, telemedicine. They feel they will be working in isolation.”

It is worth noting that health professional training programs have traditionally not been designed with these characteristics in mind.



Stakeholders consulted in the present project identified various educational strategies that are being followed to address the problems of URR populations. These range from policies on recruitment into training programs to the design and organization and location of those programs. In some cases intake is 'weighted' towards students from URR populations. For example, it was mentioned that 40% of the medical program intake at Memorial University is made up of students from URR populations. In addition, this University offers a summer school (the Medquest program) to high school students from URR populations to provide exposure to the various health disciplines' training programs.

In terms of the design and organization of training programs, stakeholders mentioned 'partnership' approaches to the delivery of training programs. In most cases these involved partnerships between educational institutions (primarily university/college partnerships). An example is the Integrated Nursing Access program for the Labrador Inuit at Newfoundland and Labrador's College of the North Atlantic. This is a collaboration between the Labrador Inuit Association, the Health Labrador Corporation, the College of the North Atlantic and a consortium of schools of nursing to provide a culturally sensitive nurse training program for students from the Inuit population. At present this remains a pilot program with a one-time intake of 18 students. The program involves new faculty hired specifically for the program as well as a large part of training being located in Goose Bay.

University/college partnerships to create 'virtual universities', the use of satellite 'training hubs', and the use of web-based distance learning to improve access to training programs were mentioned by stakeholders. However, it was argued that often universities and colleges were left 'in the dark' about the precise needs for the type and number of health care professionals required to serve URR. Moreover, in some cases these programs were considered to be too costly to implement. An alternative approach was to use contracted training programs where the employer contracts with the trainer to produce a customized training program. One such example was a contract with the College of the North Atlantic to train 56 cross-functional X-ray and laboratory technologists. The training program combined distance learning, college-based courses

Stakeholder Observations

"We give a lot of exposure to our students through distributive learning so that they have experience in rural areas and get exposure to rural practice, specialty practice in a rural hospital setting, 112 sites across the Maritimes."

"We have campus locations in 13 sites across the Atlantic provinces, plus satellite sites."

and preceptorships, to produce graduates that are regulated as limited practice technologists.

It is important to note that these strategies generate challenges of their own. In particular, the adoption of a greater level of ‘on-site’ training, through either ‘satellite’ education centers linked to existing programs and/or new ‘stand alone’ programs, creates demands for faculty and preceptors in these communities. It is anticipated that recruitment of faculty to URR-based programs will need to be at least as great as the recruitment of health care providers to practice in the communities. The use of local professionals as faculty or preceptors for these programs may involve an opportunity cost of forgone time for service provision by these providers. Hence, solving the problem of ‘trainers’ by calling on local providers may only increase the problem of provider shortages, at least in the short term (i.e., until the programs begin to graduate a flow of new providers willing to practice in the URR communities).

Strong stakeholder support was found for the use of preceptorships in URR populations. In general it seems that finding suitable preceptors is not a widespread problem. However, where this was a problem the use of itinerant preceptors covering several smaller communities was found to be a possible solution.

Summary:

Meeting the population needs of URR communities is a challenge in many jurisdictions around the world. While there have been some attempts to recruit providers through the use of financial incentives, it has not been enough to appropriately address the problem.

Some jurisdictions have focused on educating new professionals for practice in URR communities. There have been, however, three main barriers identified in traditional education and training programs. These barriers may prevent professionals from choosing to practice in an URR area. The barriers include a limited exposure to URR practice, a failure to reflect the distinctive needs of URR populations, and a lack of the skills and confidence required to practice in URR communities.

Based on international experience some enablers to URR practice have also been identified. Students who grow up in URR communities, for example, are much more likely to return when they are ready to practice. It has also been noted that education and training programs which include early exposure to URR practice and significant training in URR communities are more likely to produce graduates who will practice in URR areas. Finally, if isolation can be reduced and a balanced lifestyle can be provided, it appears that more health providers will choose to practice in URR communities.

Chapter 8: Formal Continuing Education

Health care systems around the world are constantly changing, whether it is the roles of providers, the methods of care delivery, or the system itself. These types of changes stress the importance of training and retraining the clinical workforce (Daniels & Walter, 2002). The education that health care professionals undergo can be categorized into two phases: formal training and post-license continuing education. Formal education combines the theoretical and practice-based learning that develops an individual's knowledge, skills and values in a particular discipline. To date, the curriculum has been very specific and focused on training the student with the fundamental competencies required to practice in the profession. Continuing education (CE), however, is usually more self-directed and focused on areas of the professional's interest. CE refines the existing skills the professional possesses in addition to developing new skills and expanding their knowledge base and expertise (Daniels & Walter, 2002).

While the bulk of this report has focused on formal education/training programs, it is appropriate to bring the report to a close with a chapter dealing with the continuing education component of a health professional's education and training experience. The purpose of this post-license education is to create a forum where professionals have the opportunity to learn about emerging techniques, innovations and advances in clinical practice (Bennett et al, 2000). The knowledge gained from these activities help to ensure professional growth and competence (Aiga & Banta, 2003). Many of the skills and knowledge acquired from these sessions may be applied and tested quickly by the health professional making it an effective method of disseminating current practice knowledge (Aiga & Banta, 2003).

Many licensing bodies require professionals to participate in a set number of CE activities in order to maintain their licensure. However, many professionals actively participate in CE for a variety of other reasons, including: enhancing professional knowledge, advancing professionally, and providing relief from their daily routine (Cullen, 1998). The benefit of CE to the health care system is that it aids in maintaining standards of care, it may help to improve the health of the population, and it may also be

Stakeholder Observations

“Goals and objectives of continuing education (CE) are to maintain/upgrade competencies to keep up with changes in population need. CE has to be designed to keep the skills of the existing workforce current, making sure that we have an effective and efficient labour force.”



helpful in the recruitment, motivation, and retention of high quality staff.(Brown et al, 2002).

Format of Continuing Education

Educational institutions are sometimes limited in their involvement in delivering continuing education programs; the responsibility primarily lies with the professional associations (Daniels & Walter, 2002). These associations provide CE through annual, national, and regional conferences and training events that are usually based on the maintenance of competencies that they identify. The format of CE has traditionally been didactic in nature with very little participant interaction (Daniels & Walter, 2002). Not many CE activities have involved repeated exposure to a topic, other than the advanced training courses that are offered by educational institutions. A review conducted by Daniels & Walter's (2002) found that these types of instructional activities do not show an immediate positive effect in changing a professional's performance or patient related outcomes.

There has been a recent shift from the traditional didactic model (in which the experts determine what the professional should acquire) to a learner-focused interactive model. The expert, in this latter model, adapts his or her teaching curriculum to the professional's needs (Borduas et al, 2001). The model includes techniques such as role-playing, patient discussions and other interactive approaches that Daniels & Walter (2002) identify as having an increased likelihood of modifying practitioner behaviour. This literature is similar to literature found on adult and apprenticeship learning.

Continuing education can be costly and difficult to access, thus there has been a move towards developing other methods to reach the needs of health professionals. Health care professionals are seeking the latest, most current health information, and the internet is becoming a key source of information (Cobb, 2003). However, development here is in its early stages. Other web-based applications, as well as videoconferencing and distance education are enabling practitioners in rural or remote settings to access CE.

Current Issues

The development and delivery of CE varies greatly between professions in terms of method, content and requirements. As a result of this variability, a number of issues come to light.

In Canada, core competencies are usually identified by the professions' regulatory bodies. However, the challenge is that the input with respect to employers, providers and other professions is not taken into account when the professions' competencies are identified. This can lead to a 'siloed' approach to provider competencies in an era where

interdisciplinary teams and practices are becoming increasingly the methods of health care delivery.

Another issue is that the pressures of their work environment do not enable practicing professionals to take the time to participate. Many health professions face shortages, thus the professional is unable to be relieved of his or her duties. Some of the stakeholders consulted in this project maintained that employers and professional organizations should play a role in the support and cultivation of CE programs.

Additionally, health care professionals need to be motivated to participate in CE activities. Bennett et al. (2000) indicate that the following need to be in place in order for professionals to want to take part in CE:

- Promote activities for professionals to learn from their clinical experience,
- Provide appropriate resources,
- Provide high quality educational activities,
- Establish a meaningful educational continuum, and
- Develop new systems to measure the impact of learning.

**Stakeholder
Observations**

“CE is a shared mandate - depending on level of competency - pursued by partnerships with employers, educational institutions and professional organizations. All derive benefit from the relationship.”

Bennett et al. (2000) also note that creating an ideal setting for CE is necessary for a program’s success. Bennett et al. identified the following as key components:

- Methods of learning and development – educators have to determine what motivates adult learners;
- Translating experience into knowledge and linking professional development with practice changes;
- Problem-based/practice-based learning – approaches to CE should mirror decisions that professionals make in their daily encounters with patients;
- Organizational behavior – educators need to understand how employer organizations work;
- Team development and health goal-setting are increasingly relevant; and
- Educators must maintain their competencies, and must be current and up to date.

A cooperative effort from employers, institutions, professional organizations and other colleagues is needed to help ensure that the above are in place. This may serve to encourage CE among health care professionals.

Private organizations, such as the pharmaceutical industry, have also become involved in delivering continuing education and training activities. The pharmaceutical industry continues to fund speakers, workshops and advertising for many CE programs. However, there is some concern of the potential adverse effects related to the promotion of specific products and brands through these activities (Daniels & Walters, 2002).

As mentioned earlier, educational institutions often do not play a large role in the delivery of CE programs. The limited interaction between the institutions, employers and professional associations may not facilitate appreciation by the educational institutions of the profession's needs in terms of continuing competencies. While some of the stakeholders felt that educational institutions should be more involved in delivering CE, many such institutions noted that they had neither the time nor the funding for these types of programs.

The effective delivery of CE has been a challenge because of limited administrative commitment and faculty support (Eustace, 2001). The organization of CE is such that there are few preceptors and educators that are willing to provide the administrative and teaching commitments required. The cost-effectiveness and patient outcomes have not been fully studied. Although the notion of continuing education is well-received, the method and content require more research to determine their effectiveness.

Summary:

Formal continuing education is an important component of practice for many health care providers. However, there are some significant challenges. These include a lack of access or funding and also the inability to take the time off work to pursue educational opportunities. Additionally, there is little or no collaboration between educational institutions, employers, and professional groups as to the content of the CE programs.

In order for CE to overcome these challenges, providers need to have the right resources and be involved in programs with high quality educational content. It has also been found that creating the right setting is necessary for a program's success. This includes finding appropriate methods of learning and development, mirroring decisions with actual practice situations, team development, and linking professional development with practice changes. Lifelong education is important for many professions but it is especially important for health care providers. CE can help to ensure that health care professionals will provide the most effective and efficient care to patients/clients of the Canadian PHC system.

Chapter 9: Recommendations

From a general perspective, the environmental scan made it clear that the context, goals, and partnerships in health education/training are very important. The most prominent specific issues are the momentum toward interdisciplinary primary health care teams, the increasing entry-to-practice credentials in some professions, and the shrinking population of young people to recruit into the health profession training programmes.

The issues and trends identified in the environmental scan provided insight for the development of the simulation model in this project by influencing both the structure of the simulation model and the policy scenarios tested. This is an important step because the simulation model is intended to allow policy-makers to test scenarios and determine their impact on the education and utilization of health providers prior to full implementation of the policy agenda.

1. The changing health care needs of the population should form the basis (although not the sole consideration) of all decisions and practices regarding health care provider education, certification, licensure and full scope of practice. Population health needs and evidence of outcomes must inform what providers do, and what providers are required to do must inform how they are educated and trained.
2. Educational programmes across health care disciplines and roles need to foster the skills, attributes, and dispositions necessary for effective interdisciplinary team work. There must be emphasis placed on research to determine how to best prepare health care professionals to work in such teams. While the impact of interprofessional education on patient, provider and system outcomes in a variety of practice settings needs more research attention, there is evidence that collaborative PHC teams do improve such outcomes.
3. Educational programmes for all health care providers should offer interprofessional classroom and clinical learning opportunities to prepare them to work effectively in teams.
4. Health care provider education must be informed by knowledge of the competencies required to positively contribute to the health of individuals or populations. Detailed competency profiles provide an important basis for curriculum development and CE in each health care provider group.
5. A national regulatory framework would be the most effective way to influence the establishment of collaborative competencies. Appropriate regulatory frameworks for the adoption of interprofessional teams are required.

Trends and Issues in Health Education

Collaborative competencies will form an important part of the core competencies for professional groups to ensure appropriate outcomes for both learners and patients. A regulatory framework among the Atlantic Provinces could be an important first step.

6. Key stakeholders must engage in the necessary discussion about appropriate changes in the liability of health care providers associated with interdisciplinary team practice.
7. The need to evaluate provider remuneration models is required to support the adoption of collaborative practice.
8. In the face of uncertainty regarding the impact of increased entry-to-practice requirements on system as well as client and provider outcomes, dialogue must occur among departments of health and education, universities, colleges, licensing bodies, and professional associations. Such changes must be driven by changes in the needs of populations and the efficient delivery of health care services to meet those changing needs.
9. Changes to methods of certification, licensure and regulation should be considered with full knowledge and transparency as to what evidence exists to support these changes.
10. As needed, the recruitment of students into health professions programmes must form part of the recruitment mandate for some provincial governments, regional health authorities, professional associations, unions, employers, etc. Exposure must start at an early age. While programmes for high schools are common place, perhaps grade school may offer another strategic target to capture the imagination of potential future health professionals.
11. Use the inventory of Atlantic Canada health education/training programmes developed and delivered in this project as a model for an interactive resource that can be embraced by the educational institutions and supported by provincial governments. Determine where the inventory is to be housed and who will be responsible for administering and maintaining the database. Finally, establish an Atlantic Canada understanding for data sharing and upkeep of the inventory, including key stakeholders from educational institutions.

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Appendix 1: AHETPS Steering Committee Members

<u>NEW BRUNSWICK</u>	<u>NOVA SCOTIA</u>
Michele Roussel , Advisor Department of Health & Wellness	Dr. Peter Vaughan , Chief HHR Officer Department of Health
Joanne Fletcher , Director Health Planning, Policy and Legislation/ Health and Wellness	Jennifer Murdoch , Project Manager Department of Health
Louise Boudreau , Exec Director Department of Education	Kelly McKnight , Department of Education
Brenda McCavour , Consultant Training & Employment Development	
Debbie Burns , Executive Director Deputy Minister / Training and Employment Development	
Lorraine Thomas , Senior Policy Advisor NBCC Development / Training and Employment Development	
<u>NEWFOUNDLAND & LABRADOR</u>	<u>PRINCE EDWARD ISLAND</u>
Andrew Wells , Manager of Human Resource Planning Dept of Health & Community Services	Susan MacKenzie , Director (Co-Chair) Dept of Health & Social Services
Kamrul Islam , Sr. Policy Analyst Department of Education	Susan Graham (Co-Chair) Department of Education
	Michael Clow , Director Continuing Education and Training
<u>ATLANTIC HEALTH H R ASSN</u>	
Glenn Davis , Project Coordinator	

Appendix 2: List of Stakeholders

- Dr. Angelo Balcastro, Vice President, Academic, University of New Brunswick
- Dr. Katherine Bigsby, PEI Medical Society
- Ms. Heather Bishop, Dean of Health and Human Services, Nova Scotia Community College
- Monsieur Neil Boucher, Vice-recteur a l'enseignement et la recherche, Universite de Moncton
- Ms. Louise Boudreau, Executive Director, Post-Secondary Affairs, Department of Education
- Ms. Loretta Chard, Assistant Deputy Minister, Policy and Planning, Newfoundland and Labrador Department of Health and Community Services
- M. Yves Chouinard, Executive Director, Collège communautaire du Nouveau-Brunswick (francophone) / Training and Employment Development
- Dr. Harold Cook, Dean, Faculty of Medicine, Dalhousie University
- Mr. Richard Corey, Executive Director, New Brunswick Community College (Anglophone) / Training and Employment Development
- Dr. Kim Critchley, Dean, School of Nursing, University of Prince Edward Island
- Ms. Micheline Daigle-LeBlanc, Coordinator, French Language Health Services, Nova Scotia Department of Health
- Dr. Keith De'Bell, University of New Brunswick
- Mr. Stephen Dodge, Vice President, Human Resources, St. John's Health Care Corporation
- Mr. Wayne Doggett, Senior Executive Director, Higher Education, Nova Scotia Department of Education
- M. Nassir El-Jabl, Vice-recteur a l'administration et ressources humaines, Universite de Moncton
- M. Normand Gionet, Dean Faculty of Health Sciences, Universite de Moncton
- Ms. Janet Hazelton, Nova Scotia Nurses Union
- Mr. Bruce Hollett, Deputy Minister of Education, Government of Newfoundland and Labrador
- Mr. Ray Hubble, Instructor (Respiratory Therapy), NBCC Saint John Campus / Training and Employment Development
- Ms. Janet Kingston, Executive Director & Registrar, New Brunswick Society of Medical Laboratory Technologists
- Mr. Bill Koval, President, The New Brunswick Association of Respiratory Therapists
- Dr. Sandra LeFort, Director, School of Nursing, Memorial University of Newfoundland

- Mr. John Malcolm, Chief Executive Officer, Cape Breton District Health Authority
- Dr. Lynn McIntyre, Dean, Faculty of Health Professions, Dalhousie University
- Ms. Kelly McKnight, Senior Consultant, Nova Scotia Advisory Board on Colleges & Universities
- Mr. Brian McMillan, Vice President, Programs, Holland College
- Ms. Irene O'Brien, Campus Administrator, College of the North Atlantic
- Mr. John Peddle, Executive Director, Newfoundland and Labrador Health Boards Association
- Dr. David Precious, Dean, Faculty of Dentistry, Dalhousie University
- Mr. David Riley, Deputy Minister, Prince Edward Island Department of Health and Social Services
- Mme. Andrée Robichaud, Assistant Deputy Minister, New Brunswick Department of Health and Wellness
- M. Pascal Robichaud, Conseiller principal en politiques, Affaires postsecondaires, Ministère de l'Éducation Nouveau-Brunswick
- Dr. James Rourke, Dean, Faculty of Medicine, Memorial University of Newfoundland
- Ms. Michele Roussel, Allied Health Professional Resource Advisor, New Brunswick Department of Health and Wellness
- Ms. Jocelyne Roy-Vienneau, Assistant Deputy Minister, New Brunswick Department of Education
- Mme. Mai Savoie, coordonnatrice régionale du Consortium national de formation en santé (Moncton)
- Ms. Jan Squires, Director of Allied Health Services, St. John's Health Care Corporation
- Ms. Lyne St-Pierre-Ellis, Physician Resource Advisor, New Brunswick Department of Health and Wellness
- Ms. Shauna Sullivan Curley, Deputy Minister, Prince Edward Island Department of Education
- Ms. Alice Thériault, Chief Nursing Officer & Nursing Resource Advisor, New Brunswick Department of Health and Wellness
- Mr. Michel Thériault, Assistant Deputy Minister, NBCC/CCNB/Training and Employment Development
- Dr. Peter Vaughn, Chief Health Human Resource Officer, Nova Scotia Department of Health

Appendix 3: Stakeholder Questions

Interprofessional Education

It has been suggested the involvement of interdisciplinary primary health care teams requires more interprofessional education. Based on an environmental scan conducted on behalf of Health Canada, the following are possible policy initiatives to promote interprofessional education (IPE):

- I. Restructure an envelope of funding for professional education
 - o Tie it to conditions such as:
 - Must apply across faculty jurisdictions
 - Housed in a central, neutral unit
 - Evidence of support from deans and chairs
 - Must generate collaborative competencies
 - II. Restructure faculty reward system to include recognition of interdisciplinary scholarship
 - III. Fund the inclusion of IPE in accreditation standards/criteria
 - IV. Direct profession regulatory bodies to include collaborative competencies in their core competencies
1. Which of these initiatives would you consider implementing or supporting?
 2. What magnitude of impact might these initiatives have on the quantity and quality of health outcomes (e.g. improved access to care, increased provider satisfaction, decreased hospitalization)?
 3. Are there other policy initiatives that might be effective in promoting quantity and quality of health outcomes?

Trends in Education and Training Programs

1. What processes are used to determine length, method and content of health education and training programs?
2. What factors are considered in determining these processes?

Recruitment and Retention

1. What are strategies in recruiting and retaining students in health education/training programs?
2. What are strategies for recruitment and retention of students from diverse communities?
3. What are strategies in recruiting and retaining faculty in health education/training programs?
4. Are these strategies working?

**Education for Underserved, Rural And Remote Populations**

1. What education and other policies are used to address problems of access in underserved, rural and remote populations?
2. How do Departments of Health and Education work together to plan education/training programs for underserved, rural and remote populations?

French Language Health Education and Training

1. What strategies/policies do you have in place to increase the number of available health education and training seats for francophones?
2. What recruitment and retention strategies do you have in place for students in French language health education and training programs?

Formal Continuing Education

1. What is the need for continuing education?
2. Whose mandate is it to offer continuing education and training programs?
3. What are the funding bodies for continuing education?
4. What are the goals and objectives of continuing education?

Certification, Licensure and Scope of Practice

1. Do you believe it is important to achieve a competency based approach in educational programs?
2. What are the pros and cons of using a competency based framework?
3. How should Departments of Health and Education respond to pressures for changing scopes of practice?

Éducation interprofessionnelle

On a laissé entendre que l'intervention d'équipes interdisciplinaires de soins primaires nécessite plus d'éducation interprofessionnelle. D'après une analyse de la conjoncture effectuée au nom de Santé Canada, différentes orientations stratégiques peuvent être prises pour promouvoir l'éducation interprofessionnelle :

- I. Restructuration d'une enveloppe budgétaire pour l'éducation professionnelle
 - L'assortir de conditions, par exemple :
 - S'applique aux différentes facultés, indépendamment de leurs compétences
 - Administrée dans un service central et neutre
 - Bénéficie de l'appui des doyens et des détenteurs de chaires
 - Doit générer des compétences de collaboration
- II. Restructuration du système de récompense des facultés pour y inclure l'octroi de bourses interdisciplinaires
- III. Ajout de l'éducation interprofessionnelle aux normes d'accréditation/critères
- IV. Encouragement des organismes de normalisation des professions à inclure les compétences de collaboration dans les compétences de base.
 1. Lesquelles de ces mesures envisageriez-vous de mettre en œuvre ou d'appuyer?
 2. Quelle est l'importance des répercussions de ces mesures sur la quantité et la qualité des résultats en santé (p. ex. : meilleur accès aux soins, satisfaction accrue des fournisseurs de services, diminution des hospitalisations)?
 3. Y a-t-il d'autres orientations stratégiques qui pourraient s'avérer efficaces pour promouvoir la quantité et la qualité des résultats dans le domaine de la santé?

Tendances dans les programmes d'études et de formation

1. Quels sont les procédés utilisés pour déterminer la durée, les méthodes et le contenu des programmes d'études et de formation en santé?
2. Quels facteurs sont considérés pour déterminer ces procédés?

Recrutement et conservation

1. Quelles sont les stratégies de recrutement et de maintien aux études dans les programmes d'études et de formation en santé?
2. Quelles sont les stratégies de recrutement et de maintien aux études des étudiants provenant des diverses communautés?
3. Quelles sont les stratégies de recrutement et de maintien en poste des professeurs dans les programmes d'études et de formation en santé?
4. Ces stratégies fonctionnent-elles?

Éducation pour les populations rurales, éloignées et mal desservies

1. Quelles politiques en matière d'éducation ou autres invoque-t-on pour résoudre le problème de l'accès pour les populations des régions rurales, éloignées ou mal desservies?
2. Comment les ministères de la Santé et de l'Éducation peuvent-ils travailler de concert pour planifier des programmes d'études et de formation s'adressant aux populations rurales, éloignées et mal desservies?

Éducation et formation en français dans le domaine de la santé

1. Quelles sont les stratégies et les politiques mises en place pour augmenter le nombre de places pour les étudiants francophones dans les programmes d'éducation et de formation en santé?
2. Quelles sont les stratégies de recrutement et de maintien aux études mises en place pour les étudiants des programmes d'études et formation en français?

Éducation continue

1. Quels sont les besoins en éducation continue?
2. À qui revient le mandat d'offrir des programmes d'éducation et de formation continue?
3. Quels sont les organismes pourvoyeurs en éducation continue?
4. Quels sont les buts et les objectifs en éducation continue?

Certification, licence et champ de pratique

1. Croyez-vous à l'importance d'une approche axée sur les compétences dans les programmes d'études?
2. Quels sont les pour et les contre de l'utilisation d'un cadre de travail axé sur les compétences?
3. Comment les ministères de la Santé et de l'Éducation devraient-ils réagir aux pressions exercées pour modifier les champs de pratique?



Appendix 4: Project Coordinator's Cover Letter

Dear

Earlier this year, your organization was appraised that the Atlantic Departments of Health and Education agreed to jointly manage the Atlantic Health Education Training Planning Study (AHETPS). This study, which builds on recently completed provincial health workforce profiles, is designed to provide decision-makers with information at a regional level to permit the assessment of various health education policy alternatives.

The attached letter is being circulated by Med-Emerg International Inc (MEII) as primary contractor for AHETPS. The Atlantic Health Human Resources Association and MEII are requesting your assistance in providing information that will be incorporated into the study's recommendations for managing health program capacities to meet the anticipated needs of Atlantic Canada.

The AHETPS Executive Steering Committee recognizes the importance of previous contributions to provincial health workforce studies (Phase I) and appreciates your continued support in responding to this request to assist in the completion of this important study.

Should you wish further information regarding the objectives and scope of the study, you are encouraged to contact the AHETPS Project Coordinator, Glenn Davis, at (902) 424-7606 or via email at gdavis@cap-cpma.ca.

Glenn Davis, Project Coordinator
For
Susan MacKenzie/Susan Graham
Co-Chairs AHETPS Steering Committee



Chère madame, cher monsieur,

Un peu plus tôt cette année, votre organisation a été informée que le Département Atlantique de Santé et Éducation a accepté de gérer conjointement la «Atlantic Health Education Training Planning Study » (AHETPS). Cette étude, qui s'appuie sur des profils provinciaux récents sur la main d'œuvre en soins de santé, est conçue pour fournir de l'information de niveau régional aux décideurs afin de leur permettre l'évaluation de diverses politiques alternatives d'éducation en soins de santé.

La lettre ci-jointe est envoyée par Med-Emerg International Inc (MEII) en tant que contractant principal pour la AHETPS. L'Association Atlantique des Ressources Humaines en Santé et MEII vous demandent votre collaboration pour recueillir l'information qui sera incorporée aux recommandations de cette étude afin de gérer les capacités du programme de santé et rencontrer les attentes de Canada Atlantique au niveau des besoins.

Le Comité Exécutif de Coordination de la AHETPS reconnaît l'importance des contributions précédentes aux études sur la main d'œuvre en santé (Phase 1) et apprécie votre appui continu en réponse à cette demande d'aide dans l'élaboration de cette étude importante.

Si vous avez besoin de plus d'information concernant les objectifs et la portée de cette étude, n'hésitez pas à contacter le Coordonnateur du Projet AHETPS, M. Glenn Davis, au (902) 424-7606 ou par courriel à gdavis@cap-cpma.ca.

Glenn Davis, Coordonnateur de Projet
pour
Susan MacKenzie/Susan Graham
Membres du Comité Exécutif de Coordination de la AHETPS

Appendix 5: Letter to Stakeholders

Dear

Med-Emerg International Inc. was contracted by the Atlantic Health Human Resources Association (AHHRA) on behalf of Atlantic provincial governments to complete an assessment of regional health human resources by March 31, 2005. The Atlantic Health Education-Training Planning Study (AHETPS) will forecast future supply of and demand for specified health care occupations at an Atlantic level and assess the implications for the corresponding education/training programs. AHETPS is the second phase of a regional cooperation initiative of the Departments of Health and Education. AHETPS will build on primary data collection conducted during the provincial health workforce studies.

The primary objective of AHETPS is to develop a regional health workforce forecasting and education planning tool that can be used to ensure that Atlantic Canada can provide the appropriate mix and quantity of health care providers when needed. It is anticipated that during the study, issues will be identified that impact the supply of and demand for education and training programs to prepare new graduates to meet the changing requirements for health care delivery.

You have been identified as a key stakeholder who can assist us in identifying and understanding the issues that will affect the education and training of health sector graduates. Med-Emerg invites your assistance in offering your expertise on the issues in the attachment to this letter.

Dr. Rob Alder (Project Manager), Dr. Gail Tomblin Murphy (Consultant, Dalhousie University), Dr. Linda O'Brien-Pallas (Consultant, University of Toronto) and I will be the members of the team that will be involved in the consultation process. The consultation process will involve a one and a half to two hour teleconference with you (if you agree to participate) and three of the four individuals listed above. During this teleconference, we hope to focus on three or four of the attached topics that you are comfortable addressing.

Your involvement will serve to enhance the relevance and value of the findings of this work. Through this process the issues impacting health education and training programs in Atlantic Canada will be examined and the implications for the management of health education programs will be analyzed.

I will be contacting your office shortly to determine your availability to participate and to coordinate a teleconference to take place during the last two weeks of October. At this time, if you are able to participate, please indicate which of the topics you would like to



Trends and Issues in Health Education

discuss during our meeting. Should you have any questions please contact me at the numbers or addresses below. Your cooperation in providing information that will enhance the value of this study is greatly appreciated.

Sincerely,

Shoba Ranganathan
Med-Emerg International
Project Coordinator
Atlantic Health Education Training Planning Study
P: 902-765-3980
F: 902-765-2581
Email: sranganathan@med-emerg.com

M.,

Med-Emerg International Inc. a été mandatée par l'Atlantic Health Human Resources Association (AHHRA), au nom des gouvernements provinciaux de l'Atlantique, pour effectuer une évaluation des ressources humaines régionales en santé d'ici le 31 mars 2005. L'Atlantic Health Education Training Planning Study (AHETPS) pourra ainsi prévoir l'offre et la demande futures au niveau des métiers spécialisés en santé pour la région atlantique et ainsi mieux évaluer les répercussions sur les programmes correspondants d'études et de formation. L'AHETPS représente la deuxième phase d'une mesure de coopération régionale des ministères de la Santé et de l'Éducation. L'AHETPS s'appuiera sur une première base de données recueillies lors des études sur la main-d'œuvre provinciale en santé.

Le but premier de l'AHETPS est de mettre au point un outil de planification permettant de prévoir les besoins d'éducation et de main-d'œuvre en santé dans la région afin de s'assurer que les provinces de l'Atlantique peuvent fournir un ensemble, tant quantitatif que qualitatif, de fournisseurs de services de santé pour répondre à la demande. Il est à prévoir que dans le courant de cette étude, certains points seront soulevés concernant l'offre et la demande de programmes d'éducation et de formation pour préparer les nouveaux diplômés à répondre aux exigences changeantes dans la fourniture des soins de santé.

Vous avez été désigné comme un partenaire-clé pouvant nous aider à cerner et à comprendre les enjeux et les obstacles qui pourront affecter l'éducation et la formation des diplômés du secteur de la santé. Med-Emerg vous invite à collaborer avec elle en offrant votre expertise sur les sujets abordés dans la pièce jointe à cette lettre.

Nous avons contracté Mme Aldéa Landry pour conduire la consultation en français avec vous. Cette consultation, qui ne devrait pas durer plus d'une heure et demie, portera sur trois ou quatre des sujets ci-joints selon votre convenance.

Votre participation servira à augmenter la pertinence et la valeur des résultats de ce travail. Dans ce processus, les points ayant une incidence sur les programmes d'études et de formation en santé au Canada atlantique seront examinés et les répercussions pour la gestion des programmes d'études en santé seront également analysées.

Si possible, nous aimerions vous consulter, en même temps. Mme. Aldéa Landry contactera votre bureau sous peu pour déterminer votre disponibilité. Actuellement, si vous décidez de participer, voudriez-vous nous indiquer quels sont les sujets que vous désirez aborder lors de cette entrevue. Si vous avez des questions, n'hésitez pas à communiquer avec moi ou Mme. Landry aux coordonnées ci-dessous. Nous vous savons



gré de votre collaboration et de l'information que vous nous fournirez, qui augmentera la pertinence de cette étude.

Recevez, Monsieur, l'expression de mes sentiments les meilleurs.

Shoba Ranganathan
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