



Building for the future of health care in Northern B.C.

A report by the UNBC
Northern Medical Program
Community Action Group

October 2003

Responding to the health care needs of Northern communities

The creation of the University of Northern British Columbia (UNBC) Northern Medical Program Community Action Group by the Minister of Health Services is part of the provincial government's commitment to strengthening rural health care. It dovetails with the rural incentive program, a major component of the government's overall strategy to create accessible, fair, affordable and inclusive public health care services for the people of B.C.

The community action group examined how rural medicine can be developed and sustained in Northern B.C. by mapping out strategies to support the newly created Northern Medical Program (NMP). The NMP, in which physicians will be trained for practise in the North at UNBC and at clinical sites throughout Northern B.C., is an essential component of the government's expansion of rural health care services. Community action group members have produced this report, which contains recommendations for comprehensive action.

There is no question the establishment of the NMP and its approach to rural medicine is the right prescription for Northern health care. Rural medical programs have proven to be highly successful in Northern B.C., where rural family physicians have funded the training of family practice postgraduate trainees in communities across the North for almost 20 years. This approach has also been adopted in other parts of the world, and the community action group has gathered information from other jurisdictions on their best practices so that we may continue to build on this success here.

The need to implement these recommendations immediately is of critical importance. A momentum has begun with the establishment of the NMP, and it is vital that we move forward now to ensure its success. The future of Northern health care depends on it.

Action group members are pleased the provincial government has responded to the needs of Northern B.C. with this commitment. By working together, learning from each other and pooling knowledge and resources, we can build a physician base that will serve our residents well for many years to come and help ensure a healthy future for Northern B.C.

The action group also points out that there are, of course, cost implications to the recommendations made in this report. While some preliminary work has been done in this area, more cost estimates should be undertaken for those recommendations with direct budget needs.

Table of Contents

UNBC Northern Medical Program Community Action Group Members	4
Message from the Chair	5
A commitment to health care for British Columbians who live in Northern communities	7
A Northern Medical Program for B.C.	8
About the UNBC Northern Medical Program Community Action Group	9
Executive summary	11
A blueprint for action	15
1. Strategies to support the development of the Northern Medical Program (NMP)	16
2. Key priority areas to focus recruitment in support of the NMP	19
3. Specific strategies with active recruitment/retention initiatives for medical teachers and health professionals required by the NMP	22
4. A marketing strategy to promote the Northern region of British Columbia as having excellent communities in which to learn and practise rural medicine	26
Appendix A	29
Appendix B	30

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We emphatically believe that a Northern-centered approach to physician training will create a stable and permanent solution to our health care needs.

Message from the Chair

Building for the future of health care in Northern B.C. was prepared by the University of Northern British Columbia (UNBC) Northern Medical Program Community Action Group. It is intended as a blueprint for supporting an exciting new direction in health care services and education for Northern B.C.

This new approach involves centering the education of future physicians for the North right here in the North. It is a plan that makes eminent sense, and we are proud of our role in helping chart this reality. Our work and recommendations support the creation of the new Northern Medical Program, in which physicians will receive their education at the UNBC campus in Prince George and at clinical sites throughout Northern B.C. This is a partnership with the University of British Columbia and an innovative step forward in providing needed medical services for this part of the province.

We emphatically believe that a Northern-centered approach to physician training will create a stable and permanent solution to our health care needs. We know from our experience with the UBC Family Practice Residency Training Program and our consultations with other jurisdictions have confirmed that when education, training and recruitment take place in the North, physicians are more likely to stay and a stable health care system begins to take root. When mentors and educators in rural medicine are ready and able to have others follow in their footsteps, not only are there physicians available for the people who live here, they have an intimate and first-hand knowledge of local health care needs.

The work of the committee, and indeed this whole new program, is a result of effective partnerships. We would like to thank most sincerely the many groups and individuals who collaborated with us in formulating our recommendations – we could not have prepared this blueprint for action without their valuable input.

continued

I would like to thank all the members of the Northern Medical Program Community Action Group for their hard work and dedication in preparing this report and its recommendations, and to the B.C. Minister of Health Services for the opportunity to do so. I am confident it will help shape a positive future for health care in Northern B.C.

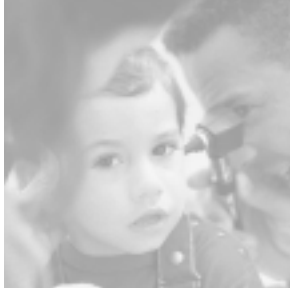
Respectfully submitted,



Mayor Colin Kinsley

CHAIR

UNBC Northern Medical Program Community Action Group



The viability and sustainability of B.C.'s health care services depends on the appropriate supply of health care providers in every part of the province.

A commitment to health care for British Columbians who live in Northern communities

People have a right to quality health care that is accessible and available where they live. In order to meet this need, a comprehensive medical infrastructure of physicians and other health care professionals needs to be in place.

The viability and sustainability of B.C.'s health care services depends on the appropriate supply of health care providers in every part of the province.

To help develop this medical infrastructure, the provincial government is developing a 10-year health human resources plan that provides for the training, recruitment and retention of physicians, nurses, specialists and other health care providers in every area of the province, and that addresses critical skills and staffing levels in under-serviced areas.

From Fort Nelson to Williams Lake, the Queen Charlotte Islands to Valemount, it is part of a comprehensive effort to strengthen rural health care throughout our Northern communities.

The work of the UNBC Northern Medical Program Community Action Group is an important building block in planning for the development of the medical infrastructure in Northern B.C.

A Northern Medical Program for B.C.

The Northern Health Sciences Centre, part of the University of Northern British Columbia (UNBC) campus in Prince George, was unveiled in November 2002. Its creation signals a comprehensive, effective and proven approach to building a medical infrastructure for the people of Northern B.C.

The Northern Medical Program (NMP) will be established here and marks the beginning of a new Northern-based training opportunity for physicians. The program will educate its students in the North, who will train and, in many cases, choose to remain in the North. Though students who graduate from the program will be qualified to practise anywhere they choose, the NMP will specialize in the training of physicians for rural and Northern practice and for work with First Nations communities.

In addition, both practising and new physicians will have access to educational opportunities through the NMP.

The NMP is an expansion of the University of British Columbia (UBC) medical program and operates in a partnership between UNBC and UBC. A similar program is in development for Vancouver Island with UBC and the University of Victoria.

The first set of students will begin their training at UBC in Vancouver, and then move to the UNBC campus in January 2005. The first group of medical students will graduate in May 2008. Residency requirements in family medicine will be completed in 2010, and it is anticipated that by this time, the NMP will graduate 24 physicians annually. It is expected that by the end of the decade this number will increase to up to 32 students per year. Some graduating students may opt to go into specialty programs.

It should be noted that the impact of the NMP on health care services in Northern B.C. will be significant. There are approximately 300 physicians currently practising in Northern British Columbia, of



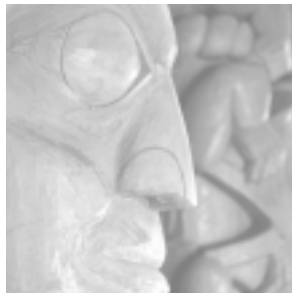
The program will educate its students in the North, who will train and, in many cases, choose to remain in the North.

which approximately 80 per cent have received their training from jurisdictions other than B.C. It is clear that if we are successful in retaining physicians for service after graduation from the NMP, it will have a significant impact over time. Based on research by UNBC and UBC of other jurisdictions, it is estimated that about 70 per cent of the NMP graduates are likely to be retained in the North.

About the UNBC Northern Medical Program Community Action Group

The group was set up by Minister of Health Services Colin Hansen and had its first meeting in May 2003. Members met four times: May 9, June 13, September 5 and October 10.

Its mandate was to report back to the Minister by October 31, 2003 on a strategy for promoting a successful Northern Medical Program (NMP), with a focus on recruitment and retention of health professionals and on making Prince George and the Northern region a centre of excellence in rural health care and health education.



Its mandate was to report back to the Minister on a strategy for promoting a successful Northern Medical Program (NMP)

Executive Summary



Providing medical education in the North gives Northern students greater access to medical education. Students educated in the North are more likely to practise in communities here.

Why is a Northern-centered approach to medical training important?

The NMP enhances the profile of medicine and other related health careers to Northern, rural, and First Nations students and provides a program of medical education that enables students to study in the North and be educated in a Northern and rural context of health care. In the long term, such educational opportunities will positively impact on recruitment of health providers to Northern and rural communities.

Providing medical education in the North gives Northern students greater access to medical education. Students educated in the North are more likely to practise in communities here.

Presenting rural medicine as an exciting career option for students, providing effective rural mentoring and rural clinical experience are essential components of the Northern Health Authority (NHA) and will help build an effective and adequate physician base. Increasing the number of physicians, along with Northern training, will result in a stable and permanent solution to the physician shortage in Northern B.C.

We must take action now

At this time, Northern physicians must meet the daily needs of patients despite significant medical staff vacancies. For these physicians to be able to participate in the NMP as clinical faculty, steady progress in physician recruitment in the next three years is essential.

Therefore, the first phases of setting up this system will be critical in ensuring its success. As identified in this report, there is a need for medical professionals to teach at the NMP, act as mentors and provide clinical experience. There is a shortage of these professionals and, until such time as adequate numbers of physicians are trained and practising in the North, it is imperative that an adequate infrastructure supports and nurtures its development.

An overview of our recommendations

The recommendations in this report map out a comprehensive plan of action that will both ensure the long-term success of the NMP and support its development in the critical start-up phase. It should be noted that it is a challenge to build such a program in an area that is underserved and until such time as there is a sufficient physician base, the steps outlined in this report must be taken.

While all recommendations in this report are important to the success of the NMP, the overriding essential component is the adequate recruitment of core clinicians to the North. If the NHA is not able to fulfill the need for core clinicians to deliver service, it will be impossible to build a medical education program in the North. The physicians and residents of Northern B.C. are committed to this program and, without this action, the NMP will not be successful.

Our intention is to build a NMP that begins with a solid foundation and leads to a stable and permanent medical infrastructure to serve northern residents.

The key areas of focus for our recommendations are:

CRITICAL IMMEDIATE ACTIONS

- Dealing with increased medical services capacity
- Developing educational leadership opportunities
- Sustaining the program while permanent recruitment takes place
- Defining the level of support for teaching activities
- Working to reduce non-essential use of hospital care within the NHA
- Providing additional academic support
- Immediate recruitment priorities to sustain the NMP
- Recruitment strategies for clinicians
- Providing geographically dispersed medical education
- Expedite process for International Medical Graduates

LONGER TERM ACTIONS

- Establishing a Northern Centre of Excellence in Rural and Remote Health Care
- Expanding Bachelor of Nursing Program partnerships



Our intention is to build a NMP that begins with a solid foundation and leads to a stable and permanent medical infrastructure

- Establishing a new nurse practitioner program
- Providing speech pathologists for the North
- Filling the need for medical laboratory technologists and medical radiation technologists
- Developing an effective strategy for coordinating student placements

MARKETING AND HEALTH CAREER PROMOTION

- Establishing a coordinated marketing effort for Northern communities
- Providing health care career opportunities for Northern students

A blueprint for action

The UNBC Northern Medical Program Community Action Group had the following terms of reference, on which recommendations were made:



Ensuring the success of the NMP will depend on creating an effective and sustained medical infrastructure

- 1 Strategies to support the development of the Northern Medical Program (NMP)
- 2 Key priority areas to focus recruitment in support of the NMP
- 3 Specific strategies with active recruitment/retention initiatives for medical teachers and health professionals required by the NMP
- 4 A marketing strategy to promote the Northern region of British Columbia as having excellent communities in which to learn and practise rural medicine

Building a foundation for excellence

Ensuring the success of the NMP will depend on creating an effective and sustained medical infrastructure to support its goals and responsibilities: teaching, mentoring, clinical practice and ongoing education. In other words, medical professionals are not only needed for teaching at the UNBC campus, but in clinical practice across the North to provide training to students.

This demands that a sufficient infrastructure is in place to meet program needs and help ensure its success. This is particularly critical as the NMP gets underway.

The following recommendations take into consideration and build on work already accomplished on forecasting medical service needs for Northern B.C. and current family practice post-graduate programs in

rural communities. For example, the foundation for some of the community action group's work is a report on curriculum mapping and physician supply undertaken for the UBC Faculty of Medicine by Dr. Judith Vestrup M.D, F.R.C.S.C, in September 2003 titled *Final Report Integrated Physician Supply Plan and Curriculum Mapping – Northern Medical Program*. This report details medical and teaching requirements for the Northern Health Authority (NHA), the NMP and their overlay on physician services. It also validates and confirms the human resources planning undertaken by the Board of the NHA.

1 Strategies to support the development of the Northern Medical Program (NMP)

1.1 Dealing with increased medical services capacity

Recruitment of new physicians to the North will significantly affect access to services for patients across the North. First, referrals from the Northern interior to southern centres will decline. Secondly, some referrals from the Northeast to Alberta, and from the Northwest to Vancouver, will be redirected to Northern B.C. communities as medical and transportation services there become more reliable. The overall effect will be an increased capacity to provide care for Northerners in the North, and developing a focus on excellence in the North.

In addition, Northern residents have faced poor access to specialized care in some disciplines. As the region's medical complement increases, service rates will also increase. Both repatriation and improved access will increase the use of hospital resources for specialized care.

Recommendation:

The NHA, NMP and UBC work with Ministry of Health Services/Planning (MOHS/P) to address the implications, including hospital costs, of increased capacity resulting from those medical recruitments necessary for the implementation of the NMP. As part of this, NHA and MOHS/P should model the potential repatriation of cases now leaving Northern B.C. and population access rates for specialized care. The modeling should identify the potential value of cases which could be treated in the North with successful recruitment and implement the prior allocation of this amount to support capacity building in core specialties.



1.2 Developing educational leadership opportunities

Northern specialists and family physicians will have teaching responsibilities and opportunities in the NMP. This will help build and sustain the program, and integrate medical professionals currently working in the North with new recruitments.

Recommendation:

The NMP work to provide opportunities for local specialist and family medicine physicians to take on educational leadership appointments. This work should be carried out in conjunction with the NHA physician resource plan. Funds are needed to support these opportunities and will be used for such things as backfilling time for release to workshops, development sessions and discipline orientation events.

1.3 Sustaining the program while permanent recruitment takes place

In addition to providing local specialist and family medicine physicians with opportunities to educational leadership appointments, further recruitment for permanent positions will be required. Due to the fast timeframe of the implementation of the NMP, there may also be a requirement to fast track appointments for academic clinicians. This would have recruitment costs, which would be supplemented by the existing expansion budget. HealthMatch BC would be an excellent resource to help recruit these key appointments.

Recommendation:

The NHA and NMP, in consultation with the MOHS/P and Provincial Health Services Authority (PHSA), develop interim strategies to sustain the program throughout the North while permanent recruitment occurs. The PHSA plays a role in providing provincial programs and must be linked to the strategies. Locums can be used on a limited basis, but cannot be depended on to sustain a faculty.

1.4 Defining the level of support for teaching activities

The greatest short-term challenge to the success of the NMP is access in Northern B.C. to sufficient numbers of physicians who are able to combine active medical practise with ongoing participation in the program as clinical faculty. In the initial two years of the program this challenge is focused in Prince George. In the third and subsequent years it expands to other communities and hospitals where students may undertake core clinical clerkships and electives.

Recommendation:

The MOHS/P, the NHA, UBC and NMP work together to define the time commitment of specialists and family physicians to support teaching activities in new clerkship models that may be more suitable for use in Northern communities. In addition, the report derived will assist the Ministry of Advanced Education with a funding review in 2006 of the collaborative medical undergraduate expansion.



1.5 Working to reduce non-essential use of hospital care

The success of the NMP will rely on sufficient support and funding to ensure there is the medical infrastructure in place in the community. This is especially critical in the first few start-up years until the program becomes sustainable and produces enough physicians to meet the needs of Northern B.C. For this reason, continuing to minimize non-essential use of hospital care will help more appropriately allocate funds to support core services.

Recommendation:

The NHA continue its efforts to minimize non-essential use of hospital care in order to redirect funds to support core services.

1.6 Providing additional academic support

In order to meet the NMPs academic needs, an effective Telehealth network serving every Northern community is needed. Using Telehealth, which supplies educational medical information, may be helpful in the clerkship years of a student's medical education. This would dovetail with the recommendations contained in the reports of the Premier's Technology Council on enhancing broadband coverage in British Columbia. This is a critical element in supporting the success of the NMP, and time is of the essence.

Recommendation:

The NMP, NHA and UBC programs work with the PHSA to develop an implementation plan in the area of Telehealth. This work must begin immediately as a high priority.

2 Key priority areas to focus recruitment in support of the NMP

In addition to clinical teaching requirements, other important areas of physician activity related to undergraduate medical education that would impact on physician time must be taken into consideration.

These activities are related to:

- Leadership in discipline areas
- Faculty development
- Feedback to students
- Program administration
- Curriculum development
- Evaluation/ remediation
- Career advice/mentoring
- Research related activities

Calculation for resiliency must be built into the system to cope with holidays, sick leave, attrition rates and sabbaticals. Several dedicated, part-time positions to meet academic support requirements in core curriculum areas will be necessary.

2.1 Immediate recruitment priorities to sustain the NMP

The core clerkship areas are internal medicine, general surgery, pediatrics, obstetrics, psychiatry and family medicine/emergency medicine.

Immediate Recruitment Priorities (2005) Northern Medical Program and NHA

Specialty	Physician supply plan for direct service (NHA)	Additional requirements based on curriculum mapping (Vestrup report)	Additional requirements for academic support activities	Total 2005 recruitments for NMP/NHA
General Practise and Emergency	6		1	7
General Surgery	1		.5	1.5
Plastic Surgery	1			1
Urology	1			1
Ophthalmology	1			1
Obstetrics and Gynecology	2	1	.5	3.5
Otolaryngology	1			1
Pediatrics	2	1	.5	3.5
Anaesthesia	3			3
Radiology	2			2
Internal Medicine	2	2	.5	4.5
Psychiatry	2	2	.5	4.5

Other core teaching areas with reduced involvement include pathology, anaesthesia, radiology, orthopedics, and ophthalmology.

Recommendation:

The NHA direct any remaining funds for specialist services to partially offset hospital costs resulting from recruitments that are core to the NMP. These are the major clinical disciplines that comprise the core clerkship programs and which are critical to the delivery of the program including internal medicine, general surgery, pediatrics, obstetrics and gynecology, emergency medicine, psychiatry and family medicine as identified in the above chart (Appendix A.)



2.2 Providing geographically dispersed medical education

Clinical education to meet the mission of the NMP – to train physicians for the North in the North – would be best based on a geographically dispersed model. In this model, clinical students (years three and four) would receive much of their education in smaller rural sites, communities and hospitals. In order to ensure consistent quality of teaching and student evaluations, there will be a need to incorporate additional specialist and family practice support to outlying communities with the express intent of enhancing teaching capacity in these communities. The work required in these communities will not only be direct teaching, but also additional student support, evaluation and mentoring activities. The funding for this increased work, which is in addition to teaching activities necessary for the initial developments in Prince George, needs to be tied to the NMP.

Recommendation:

The NMP be designed on a geographically dispersed model and that the required additional specialist and family practice support to outlying communities be provided.

3 Specific strategies with active recruitment/retention initiatives for medical teachers and health professionals required by the NMP

3.1 Recruitment strategies for clinicians

Although all of the recruitments and priorities for medical service needs are required, certain specialties are of core importance to the undergraduate teaching program in the short term. Creation of a stable, clinical platform for both service and teaching requires that the shortfalls in these core areas be corrected.

Recommendation:

The NHA, HealthMatch BC, UBC and NMP work together on joint recruitment of clinicians, to include clinical service delivery, education and research, giving priority to positions which are core to the development of the NMP.

3.2 Expedite process for International Medical Graduates (IMGs)

The action group recognizes the contribution that IMGs have made to Northern communities and the benefit we have realized, and will continue to realize, from their presence. They will be an important part of the staffing necessary to support the local physician base as well as the academic requirements of the NMP.

Recommendation:

That the MOHS/P and HealthMatch BC expedite the regulatory and recruitment process to facilitate the entry for IMGs to practise in Northern B.C.



3.3 Developing strategies for physician retention

In addition to the focus on recruitment, it is essential to develop strategies to enhance physician retention. Successful recruitment itself will contribute significantly to this, but other steps will also help reach this goal. For example, the development of relationships to broaden practice opportunities and provide additional resiliency for small practice groups would make a positive contribution to retention. One positive indication in this area is the work conducted by pediatricians within the NHA and PHSA in developing new models of service support in disciplines. Further development of such initiatives with other disciplines may need to be fostered.

Recommendation:

The NHA, NMP and PHSA work together to develop new strategies to increase physician retention.

3.4 Establishing a Northern Centre of Excellence in Rural and Remote Health Care

There is a shared vision by UNBC, NHA and Northern regional community colleges of a network of sites across Northern B.C. specializing in the provision of health care in rural and remote communities, in the education and training of rural practitioners and in related research, which serves as a model worthy of national and international distinction.

Recommendation:

Building on the template of the NMP as a component of the UBC undergraduate medical degree program, expand current UBC programs in the allied health sciences, particularly physical and occupational therapy and pharmacy, to educate students in the North for eventual service in Northern B.C.

3.5 Expanding Bachelor of Nursing program partnerships

UNBC and the College of New Caledonia implemented the Northern Collaborative Baccalaureate Nursing Program in 1996. Approximately 40 nurses will graduate in 2004 and 60 in 2005. The program has been expanded to Quesnel where there will be 20 students graduating by 2006. UNBC is also planning collaborative programs with North West Community College and Northern Lights College with an estimated 20 students on each campus per year once it is implemented.

Recommendation:

Continue expansion plans for The Northern Collaborative Baccalaureate Program in Nursing based on an assumption that 70 per cent of graduates could be recruited to work in the NHA area.

3.6 Establishing a new nurse practitioner program

This program is under development (it begins in 2005) and will provide nurses with advanced skills that will enable them to provide a wide range of health care services in remote locations.

Recommendation:

Finalize plans to implement nurse practitioner training at UNBC to graduate 10 to 20 students per year, as soon as possible.

3.7 Providing speech pathologists for the North

Speech pathologists are in short supply across the country. In the North, it is estimated that about 80 speech pathologists are needed. A UNBC program graduating about 10 Masters level students per year would bring the provincial total to 30 and be about equal to the ongoing demand to replace provincial retirements

Recommendation:

Investigate the potential to add to the numbers of speech pathologists by creating a Masters level program at UNBC to allow the province to graduate the number required to replace provincial retirements.



3.8 Filling the need for medical laboratory technologists and medical radiation technologists

According to CIHI statistics, B.C. graduates only half of the number of medical laboratory technologists and medical radiation technologists required to replace those retiring annually. A Northern community college program could augment the B.C. training and, at the same time, provide better opportunities for Northern students to enter this field of health care.

Recommendation:

Investigate the potential for a Northern community college to train medical laboratory technologists and medical radiation technologists. A Northern training program would enhance opportunities for Northern students, bring B.C. training more in line with provincial needs and facilitate cross-training of the two types of technology.

3.9 Developing an effective strategy for coordinating student placements

Northern hospitals already provide clinical experience for 20 to 30 UBC medical students every year, more than 200 nursing students in the collaborative Bachelor's program (all years) and 50 to 60 nursing students in the regional college Licensed Practical Nurse programs. These numbers will grow significantly with the addition of up to 72 UNBC medical students (second, third and fourth years) and at least 100 more Bachelor of Nursing students (second, third and fourth years). The capacity of Northern hospitals to accommodate students will be stretched to the limit and it has been agreed between UNBC and the NHA that Northern program students will be given a first priority for clinical experience placing.

Recommendation:

The NHA, UNBC and Northern community colleges collaborate with the B.C. Academic Health Council (BCAHC) to coordinate clinical placements of students in Northern health care programs throughout the North using the Health Sciences Placement Network of B.C. (HSPnet) as a foundation. (HSPnet is a province-wide web-enabled system for coordinating and improving health sciences student placements.)

4 A marketing strategy to promote the Northern region of British Columbia as having excellent communities in which to learn and practice rural medicine

4.1 Establishing a coordinated marketing effort for Northern communities

To date, marketing of Northern B.C. has been the sole responsibility of individual communities, with little coordination or shared information, irregular updating and limited local capacity. A coordinated marketing effort, which promotes Northern B.C., its communities, lifestyle, arts and culture, recreation and employment opportunities will help attract and retain a medical infrastructure.

In order to determine the types of information students would seek when considering the NMP, a focus group with current medical students was held at UBC. Students were asked to provide feedback on the importance of information on admissions, finances, lifestyle and academic program. The respondents considered essential information to be related to finances (scholarship opportunities and incentives for rural practice), available housing and residences, transportation options, city/community information, day care and schools and the availability of a rental guide and web site and academic opportunities.

Recommendation:

Health Match BC, NHA and Northern B.C. communities collaborate to create an interactive regional database that would be managed by HealthMatch BC.



4.2 Providing health care career opportunities for Northern students

It is of paramount importance to expose students living in Northern, rural, remote and First Nations communities to health career opportunities. Reaching students in their formative years, while they are making career choices, will enable them to consider study in the NMP and all post-secondary institutions with health care programs.

Recommendation:

School District 57 develop and deliver Health Science 12 North, an on-line course for rural, remote and First Nations communities. This course would be delivered through continuing education (School District 57) with the expertise of Prince George Secondary School science teachers and provide Northern students with the direction and confidence they need to pursue jobs in the health care sector. It will channel students into health careers and increase the recruitment and retention of rural health care providers from the very communities that have health care needs (Appendix B.)

For further information on rural health initiatives, or to download additional copies of this report, please go to the provincial government's web site at www.gov.bc.ca/healthservices.

Appendix A

Incremental Impact on Hospital Operating Costs of Planned Northern Medical Program/NHA Recruitments to 2005



Total Incremental Workload and Costs for Northern Medical Program Core Curriculum Areas

Specialty	Inpatient Admissions	Surgical & DCS Cases	Incremental Costs
General Surgery (1)	232	756	\$1,655,000
Obstetrics & Gynecology (3)	235	662	1,825,000
Pediatrics (3)	263	0	1,210,000
Internal Medicine(4)	387	0	3,090,000
Psychiatry (4)	137	0	375,000
Total	1,254	1,418	\$8,155,000

Total Incremental Workload and Costs for Northern Medical Program Non-Core Curriculum Areas

Specialty	Inpatient Admissions	Surgical & DCS Cases	Incremental Costs
Plastic Surgery (1)	88	308	\$470,000
Urology (1)	176	591	850,000
Ophthalmology (1)	7	215	250,000
Otolaryngology (1)	104	337	465,000
Anesthesia		(In Surgical Specialties)	
Radiology		(In Other Specialties)	
Total	375	1,451	\$2,035,000

¹ Obstetrics will remain constant; only gynecology workload will increase.

Cost calculated at 65%.

² Pediatrics workload and costs calculated at 50%.

³ Cost of 50% of current average assuming no expansion of intensive care beds

⁴ Cost calculated at 50% of family practice; workload calculated at 50%

Northern Health Authority, in its Health Service Redesign Plan, has identified \$5 million to be directed to expand specialist services in the Region in 2003/04 and 2004/05.

In addition to the recruitment in Table 2, Northern Health has already added 2 Orthopedic Surgeons and two Internists to the regional medical staff during 2003 – 2004. These commitments have required the allocation of more than half of the \$5 million funds available.

Appendix B

Health Science 12 North

A course for rural, remote, and
First Nations communities

“The recruitment of Health Care providers to rural, remote, Northern and Aboriginal communities must begin with educating students in their communities.”

- Rural Health in Rural Hands

Strategic Directions for Rural, Remote, Northern &
Aboriginal Communities 2002



Proposal Overview

This course would be developed and delivered from School District 57, through on-line learning, to promote health career opportunities in Northern, rural, remote, and First Nations communities. It is paramount to expose students to these career possibilities during their formative school years when they are beginning to make career choices. Health Science 12 North will therefore provide Northern students the direction and confidence needed to pursue jobs in the health sector. This course will naturally increase the recruitment and retention of rural health care providers from the very communities that have health care needs. Specifically, this course would channel students into our UNBC medical program and in general all post secondary institutions with health care programs.

School District 57 (Prince George) has the expertise and resources to design and implement a Northern, remote, rural, and First Nations secondary school program. Since Prince George Secondary School (PGSS) is the only school in the North that currently has a secondary Health Science course to encourage and prepare students for post secondary training in health science careers, we are prepared to take a leadership role to develop and implement this course. We also have the

technical support required to develop and maintain the web site that is necessary in order to have Health Science 12 North offered to all Northern British Columbia students.

The curriculum would contain the following units: Health Science Career Profiles, Human Body Systems, Northern Health, Aboriginal Health, Nutrition, Exercise Management, and Work Experience/Community Service.

In order to have Health Science 12 North available for students by September 2004, we would need to start curriculum and web site development as soon as possible. The implementation cost is estimated at approximately \$200,000. Once the course is operational, it would be self-sustaining through registration fees. Evaluation would be available in terms of enrollment, data on students continuing at post-secondary institutions in the health science field, and survey feedback from post-secondary institutions.

Note:

A comprehensive, timeline, budget, and curriculum can be provided if funding and support is available for this proposal.

Photos in this report courtesy of University of Northern British Columbia, Tourism British Columbia and the British Columbia Medical Association.

