The Northern Medical Program – Preliminary Impacts on the Physician Community in Prince George

Methodology Report

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The CDI at UNBC is interested in two fundamental issues for communities in northern BC: community capacity and community development. By undertaking research, sharing information, and supporting education outreach, the Institute is becoming a vital partner to communities interested in making informed decisions about their own futures.

We wish to thank all participants in Prince George for taking the time to answer our many questions in spite of demanding schedules.

We would also like to thank the Medical Office Assistants who were helpful in facilitating the scheduling of interviews, as well as the NMP administrative staff who provided invaluable assistance with several aspects of this study.

We would also like to thank the research staff at the CDI, including Kelly Giesbrecht, Rosalynd Curry, and Kyle Kusch.

Jennifer Crain, Laura Ryser, Rosalynd Curry, Greg Halseth, and Neil Hanlon
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Availability

Copies of *The Northern Medical Program – Preliminary Impacts on the Physician Community in Prince George* were distributed to individuals who contributed to the study, the NMP, the Northern Health Authority, The City of Prince George, the Northern Medical Society, the British Columbia Medical Association, the University of Northern British Columbia Weller Library, The College of Physicians and Surgeons of British Columbia, the Prince George Regional Hospital, and the Vancouver Foundation.

Additionally**,** copies have been posted on the CDI website (http://www.unbc.ca/cdi).

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Timeline for the Implementation of the Northern Medical Program

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2000:

June Health rally takes place in Prince George and there is a call for a northern medical school.

Aug: UNBC begins to review the development and operations of distributed medicals schools in northern and underserved areas.

UBC lobbies the Liberal Party for an increase in medical school seats on the basis of fewer opportunities for BC youth to obtain a medical education compared to other provinces

Dec: BC's Ministry of Health's Action Plan commits $620,000 to establish the BC Rural and Remote Health Research Institute at UNBC. The Institute will research northern health issues, such as population health, delivery of services, and education of health professionals in the North.

2001:

Jan: MOU signed between UBC and UNBC to jointly develop a distributed medical education program. UNBC begins planning a health sciences degree program.

Feb: UNBC and UBC form the Northern Medical Program (NMP) Strategic Planning Committee (SPC) with representation from the Northern Health Authority (NHA) and Ministry of Advanced Education.

UNBC hosted a NMP planning workshop attended by UBC and UNBC faculty, and 5 international experts.

Inter-university planning committee (IUPC) formed across UBC, UNBC, and UVIC, Ministry of Advanced Education, and the Ministry of Health.

Planning committee co-chaired by Joanna Bates (UBC) and Robin Fisher (UNBC). Seventeen working groups formed across UBC/UNBC on various aspects of developing a program plan.

Mar: UNBC visits communities in the Northern Medical Region to discuss the NMP.

Apr: Ministry of Advanced Education budget allocates funding to support the planning of the NMP.

May: UBC begins to develop an admissions process for the NMP, including an evaluation of candidate's suitability for the north. UBC Senate Admission Committee reviewed and approved the process in principle.

June: Principles, Terms of Reference, Goals of the NMP finalized by the NMP Strategic Planning Committee and discussed and approved at the IUPC. Faculty forum at the UBC Faculty of Medicine: UNBC faculty on the Strategic Planning Committee presented with UBC leads on the development of the NMP.

July: UBC and UNBC host a community forum about the NMP.

Aug: NMP Planning Committee report tabled at IUPC and accepted by the Ministry of Advanced Education and the Ministry of Health.

2002:

Feb: Budget approved for the implementation of the NMP.

Mar: BC Government commits funding to the NMP and commits $12.5 million to build the medical teaching facility.

June UBC appointed senior Associate Dean Undergraduate to lead expansion (Joanna Bates).

Sep: Dr. George Deagle and Dr. Dave Rutledge become the first appointees to positions (acting assistant deans) at UNBC to develop the NMP. All day retreat at UBC to discuss the NMP

Dec: Tumbler Ridge contributed $65,000 to the NMP Trust. Tumbler Ridge was the first of 18 communities to raise $1 per family per week for a year to support future NMP students.

2003:

Jan: Minister Colin Hanson appoints a committee of community leaders across different sectors to provide recommendations for the implementation of the NMP.

May: Duke Energy becomes the first major corporate contributor and invests $500,000 in the NMP. The UBC Senate approves the NMP admissions process.

Funding boards are selected for the NMP. Representatives from ten communities in northern BC are elected to the first Board of Directors for the NMP Trust.

Dr. David Snadden, Director of Postgraduate General Practice Education and Acting Postgraduate Dean at the University of Dundee in Scotland, accepts a joint appointment as Associate Vice President of Medicine at UNBC and Assistant Dean responsible for the NMP at UBC.

June: Undergraduate Expansion Task Force: Admissions, budget, governance, policies, and buildings.

Curriculum Mapping project completed by Judy Vestrup for the NMP Community Action Plan. This project looked at the physicians in the community and the resource needs of the curriculum and identified gaps. She also reviewed the HR plan of the NHA, and identified methodological issues that led to an updating of the HR plan prior to its submission to the Ministry of Health.

July: Ground breaking for the new Northern Health Sciences Centre. Site preparation by Western Industrial Contractors of Prince George, construction of the building by Wayne Watson Construction of Prince George.

Dr. Dave Snadden arrives as Associate Dean of the NMP.

Aug: Dr. Dave Snadden bikes to Tumbler Ridge to recognize their commitment to the NMP Trust.

Nov: The NMP and UNBC officials visit communities in the north-east to inform and develop community–university collaboration.

Dec: The NMP adds local and international expertise by appointing Dr. Gary Wilson as the new Clerkship Coordinator and Dr. Hanh Kin Huynh as a new faculty member.

NMP Trust has appointed its first officers:

President: Marilyn Davies, Terrace councillor
Vice President**:** Colin Kinsley, Mayor of Prince George
Secretary: Rose Colledge, Tumbler Ridge councillor
Treasurer: Sharon Cochran, Vice-President Administration & Finance for UNBC.

2004:

Jan: UBC and UNBC deliver the "prototypical week". Eight UBC students volunteer a week in Prince George getting all aspects of their training. Lectures are executed through videoconferencing; problem-based learning tutors are recruited; physicians teach clinical skills, and the students spend an afternoon in family physician offices.

May: Accreditation visit from Liaison Committee on Medical Education / Committee on Accreditation of Canadian Medical Schools. The team met with the NHA, UNBC, and physicians.

Aug: Students begin classes in Vancouver. The Northern Health Sciences Centre is opened in Prince George.

Sep: Dr. Kuo Hsing Kuo and Dr. Geoffrey Payne are new faculty appointed to the NMP.

Nov: Dr. David Snadden delivers the lecture at the first Bob Ewert dinner.

Dec: Fort St. John doctors contributed $100,000 to support future NMP students.

NMP Trust involves UNBC and 24 communities in northern BC, with the goal to create an endowment of $6 million.

2005:

Jan: Classes at UNBC begin on January 10, 2005 with 25 students in the NMP.

The high-tech company MTS Allstream Inc. installed about $1.4 million worth of equipment, to outfit two lecture theatres and various labs with state-of-the-art videoconferencing technology and electronic control systems that enable medical students in Prince George to connect with their peers and professors at the UBC and the University of Victoria. IBM and Cisco have contributed $197,000 worth of computing infrastructure and support services.

Feb: Canfor contributed $300,000 to the NMP Trust (NMPT).

Apr: CN donated $300,000 to the NMP Trust.

EnCana Corporation contributed $150,000 to the NMP Trust.

June: BMO Financial Group contributed $150,000 to the NMP Trust.

Aug: Alcan Inc. announces that they will contribute $500,000 over seven years to the Northern Medical Program Trust.

Oct: Dr. Snadden visits with physicians in Terrace and Fort St. John to discuss the development of core clinical training for third-year medical students at the clinical facilities around northwestern and northeastern B.C.

2006:

Jan: Second group of NMP students begin classes at UNBC on Monday, January 9.

Mar: RBC contributes $100,000 to the NMP.

Aug: Burns Lake fulfills pledge to support northern medical education. Burns Lake's contribution to the NMP Trust totals just over $65,700.

2007:

Apr: The NMP announces it has attracted 6 aboriginal students over the past three years (representing 8% of all NMP students), a vital element in ensuring that the NMP is relevant to rural and northern communities.

May: UNBC secures a $2 million private pledge to the NMP Trust that is completing the original fundraising program more than one year ahead of schedule.

2008:

May: First cohort of NMP students graduates.

The Northern Medical Program – Preliminary Impacts on the Physician Community in Prince George: Executive Summary

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Background

The Northern Medical Program (NMP) is a distributed medical education program operated by the University of British Columbia's (UBC) Faculty of Medicine, and housed at the main campus of the University of Northern British Columbia (UNBC). In August 2004, the NMP admitted its first group of students. The program will celebrate its first graduates in May 2008.

The NMP Impacts Research Group was established to begin identifying and tracking these impacts in areas such as health care, business and the economy, education, and the civic sector. The Group is comprised of multidisciplinary researchers from UNBC and UBC in fields such as Family Medicine, Community Health and Epidemiology, Social Geography, and Community Development.

Research Objectives and Questions

The NMP is expected to have long-term benefits for physician recruitment as medical graduates trained in the north are better equipped and more predisposed to practice in the region. There is also an expectation that the NMP will enhance *retention* as local physicians have more opportunities and incentives to participate in medical education, and stay connected with recent clinical and professional developments. At the same time, the NMP relies on a great deal of participation from local physicians, and we want to learn more about how participation in the NMP is affects local practice conditions. ***Our research asks physicians in Prince George about their perceptions of the impacts the NMP has had to date on local physicians' access to support networks, information, and resources. We also want to learn about how participation in the NMP affects the workload and morale of physicians already practicing in Prince George***.

Study Design and Methods

We conducted 25 key informant interviews with physicians and decision makers in Prince George, the majority of whom can speak directly to conditions prior to the establishment of the NMP and who have some level of involvement with the delivery of the program. The interviews were recorded and transcribed, and analyzed using qualitative thematic coding techniques.

Key Findings

- NMP is an important pull factor for many physicians arriving in the past five years.
- Involvement in the NMP an important factor in choosing to remain in Prince George.
- One-third of respondents noted improvements in relations with the local hospital, the health authority, and provincial government.
- Half noted more opportunities for professional interaction outside of daily routines related to the NMP (e.g., mentoring, faculty development, interactions with students).
- A majority noted enhanced opportunities to keep up with latest medical developments.
- There were mixed messages about impacts on morale, with many concerns expressed about stress from added workload associated with the program.
- There was also mixed responses about impacts on "sense of community" amongst local physicians, with some noting a loss of informality between newcomers and more established practitioners.
- Involvement in the NMP was seen to have benefits in terms of job satisfaction, an enhanced sense of connectedness with the profession, and intellectual stimulation, but these benefits were tempered with concerns about added workload stresses.
- Overall, there was a sense that the NMP will ultimately bring stability to the local physician workforce (e.g., attraction of general and specialist physicians).

Conclusion

We recognize that it is still too early to be making any firm conclusions about the impacts of the NMP. It is nevertheless important to begin understanding the ways in which the NMP impacts different aspects of its host communities. Initial studies such as this one serve as a useful baseline for ongoing evaluation and analysis.

The NMP has quickly become a focal point for creating greater cohesion and social capital amongst the local physician community. The program is also serving as a bridge in the creation of wider networks (e.g., health authority, hospital, university sector). The program has already been noted by many local physicians as a recruitment tool for those interested in teaching and mentoring.

At the same time, the operation of NMP relies on the involvement of a substantial number and proportion of local physicians. Our evidence suggests that this involvement may come at a substantial personal and professional cost to the individual physicians involved. ***These costs and pressures need to be understood, monitored, and managed if the NMP is to achieve its long-term objectives***.

Future Research

We will continue to measure and monitor the impacts of the NMP on local physician communities as part of wider efforts by the NMP Impacts Research Group to understand the community dynamics of a distributed medical education program. ***Our goals are to use exploratory qualitative studies to identify quantitative indicators that can be tracked over time, and to develop protocol for extending our impacts research to other communities that will have increasing contact with the NMP in the coming years***. Finally, we will be actively pursuing collaborations with researchers in other jurisdictions in Canada and beyond where distributed medical education models have been implemented.

Northern Medical Program Impacts Research Group:
Joanna Bates (Faculty of Medicine, UBC)
Sarah de Leeuw (Northern Medical Program, UNBC)
Neil Hanlon (Geography and Community Health Sciences, UNBC)
Greg Halseth (Geography and Community Development Institute, UNBC)
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Laura Ryser (Geography and Community Development Institute, UNBC)
David Snadden (Northern Medical Program, UBC/UNBC)

The Northern Medical Program – Preliminary Impacts on the Physician Community in Prince George: Methodology Report

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1.0 Project Background

BC has a shortage of physicians, particularly in rural and remote areas. A decade ago, this issue came to a head in northern BC. Medical staffing shortages had taken their toll and physicians across northern BC (i.e. Vanderhoof, Burns Lake, Fraser Lake, Fort St. James, Mackenzie, Houston, Chetwynd, 100 Mile House) began resigning their hospital privileges in protest of resource constraints for both delivery health care and continuing education (McLellan 1998; Porter 1998). In 2000, surgeons in Prince George threatened to resign their hospital privileges in protest of the medical staffing shortage. At this point, Williams Lake had already stopped delivering babies and G.R. Baker Hospital in Quesnel had closed its intensive-care unit (McAlpine 2000). In June of 2000, approximately 7,000 northern BC residents gathered at the Prince George Multiplex in protest of their region's physician shortage (Snadden, 2005). The rally was also attended by leading policy makers, community leaders, academics, and physicians. A call to train "physicians in the north, for the north" resulted in a dialogue between UNBC and UBC about the feasibility of medical training in northern BC (Snadden, 2005, p. 230). The hope was not only to train and recruit more doctors, but also to provide more professional opportunities to those already practicing in the region. Any new training programs would compliment UBC's family practitioner residency program in Prince George that was established in 1993 (Trick 19 January 2001).

The provincial government, the Faculty of Medicine at UBC, and many other stakeholders made investments of financial and human capital to deliver medical education programs in traditionally underserved areas as a means to address these medical shortages. Six months after the Prince George rally, an agreement was reached to create a distributed model of medical education between UBC, UNBC, and the University of Victoria[1] (Snadden, 2005). By August 2004, the Northern Medical Program (NMP) had admitted its first students (Trick 23 January 2003). In September 2006, the north end of the paediatrics ward at the Prince George Regional Hospital was upgraded to provide a work area for students from the Northern Medical Program and doctors with the UBC residency program (Trick 15 September 2006). This first cohort of the NMP will be graduating in 2008.

Now that the NMP is in place, it is time to understand some of its effects. It is vital that we begin learning now from physicians who have been practicing in Prince George since before the NMP's creation in order to better understand any impacts on the local practice environment. Early information gathering is also critical as a foundation for monitoring its impacts over the longer term and this exploratory project will provide valuable

[1] The Island Medical Program (IMP) is also an expansion of UBC's Faculty of Medicine MD Undergraduate Program. The IMP is being established on Vancouver Island in collaboration with the University of Victoria and the Vancouver Island Health Authority. For more information visit http://imp.uvic.ca/index.php.

baseline information for future studies. The primary objective of this research project is to understand how the NMP has impacted the practice environment for physicians in Prince George, including such things as the conditions known to influence physician recruitment, retention, and professional support. We are also interested in physicians' level of involvement with the NMP, their impressions of the benefits and costs of this involvement, if applicable, and their plans for future involvement with any aspect of the program.

This is an exploratory, qualitative study using face-to-face interviews and asks physicians about their impressions and experiences in the critical early phases of the NMP. The research team set out to interview physicians with at least 4 years of practice in Prince George to learn about their impressions and experiences of working conditions before and since the establishment of the NMP. Table 1 illustrates the project timeline.

Table 1. Project Timeline

September 2005 - March 2006	• Project application developed • Funding confirmed
February – April 2007	• Relevant literature gathered • Draft interview guide developed and approved by project investigators
May 2007	• UNBC Research Ethics Board process completed • Research team established • Pilot testing of interview guide • Editing and finalization of interview guide content • Selection of potential participants • Recruitment of participants begins (first mail-out of invitations to participate)
June – September 2007	• Invitation follow-up o Follow-up phone calls and faxes to potential participants o Scheduling of interviews • Second mail-out of invitations to participate and follow-up (August) • Conduct interviews • Compile field notes • Transcribe interviews • Draft interview summaries • Transcripts mailed to participants for review and approval • Edit and finalize transcripts as requested by participants • Final transcripts sent to participants
October 2007	• Finalize interview summaries • Analysis of interview content
November 2007	• Complete project draft report
December 2007	• Complete project final report

The findings of this research will serve as the basis for ongoing assessment of the impacts of the NMP. This foundation should allow future researchers to measure impacts on recruitment, retention, and professional support over the long term and in different centres across northern BC. Understanding more about the impact of the NMP in its host community is an important starting point in determining the broader role of distributed

medical programs in reducing disparities in health outcomes and health care access and promoting better professional working environments for physicians in rural and remote practice.

The goal of this project is to provide researchers, policy makers, health care planners, and community groups with information relevant to addressing the barriers to recruitment and retention in underserved areas. This research will benefit governments considering similar types of distributed medical education initiatives, and inform educational initiatives in allied health professions (for example nursing, occupational therapy, and pharmacy) that face similar challenges of recruitment and retention.

3.0 Methodology

Research Ethics

Because this is a university based research team, we are bound by standard protocol which identifies that all research conducted with people be sent to UNBC's Research Ethics Board for review and approval. Key to ethics review is that participants are advised of the purposes of the study and that their participation is voluntary. It is also important that participants be advised as to how the research shall protect their confidentiality and anonymity throughout the process, as well as how through the analysis no linkages are made between the data and the individuals, and that no individuals should be identifiable through the analysis. These points are described in the consent form attached in Appendix A. Each interview participant was given a copy of the appropriate consent form. All research procedures including sampling, recruitment, and data collection proceeded following the approval of UNBC's Research Ethics Board.

Selection of Interview Participants

Key informants were selected based on their ability to describe such characteristics as the extent of professional interactions and collaborations, opportunities for continued medical education, opportunities to work together to manage workload and other challenges, and involvement with the NMP.

First Sample

A list of potential participants (N=44) from amongst general practitioners and specialists in Prince George was selected using both purposive and random selection from publicly available lists providing the names and contact information of all Prince George physicians (N=186). The online physician directory of the BC College of Physicians and Surgeons (https://www.cpsbc.ca/cps/ physician_ directory) was the primary source, and the local phone book was also consulted. An NMP administrative assistant performed a final verification of addresses prior to the recruitment mail-out.

Purposive selection targeted physicians who were known to have some level of involvement with the NMP, and/or who would likely express interest in participating. Purpose sampling entails the identification of "information rich cases from which one can learn a great deal about issues of central importance to the purpose of the research" (Patton 1990, 169). Opinion leaders were also included in the selection process. In this sample, there was a gradient of involvement with the NMP, in that some physicians were directly involved with the NMP, while others participated on a more informal basis. A total of 21 interviews were conducted from the first sample (Table 2).

Table 2. Interview Response Rate

	General practitioners / specialists / opinion leaders, some NMP involvement (N=44)		General practitioners, no NMP involvement, (N=15)	
	# of participants	% of sample	# of participants	% of sample
Agreed & participated	21	47.7%	4	26%
Agreed but were not able to participate	3	6.8%	1	6.6%
Declined invitation	13	29.5%	7	46.6%
No response	7	15.9%	3*	20%
Total	44		15	

* Two non-responders could not be reached for a follow-up call because their publicly available contact information was outdated.
Source: Northern Medical Program Impact Study 2007

Second Sample

This second sample (N=15) was drawn later in the field season in order to get the perspective of general practitioners who were not directly involved with the NMP, and as such, to obtain additional perspective on the NMP's impact on Prince George's physician community. General practitioners who do not hold a clinical faculty position with the NMP were identified with the assistance of NMP administrative staff.

Drawing the second sample was less straightforward than expected because most physicians in Prince George are either directly or indirectly involved with the NMP. As such, identifying a clearly defined population of physicians who are not involved with the NMP was challenging, and a degree of overlap between the two populations was apparent.

The recruitment success rate was a lower in the second round of sampling (26% versus 47.7% in the first sample), and a total of 4 interviews were conducted (Table 2). The smaller size of this population and its non NMP-associated status were factors that likely contributed to the lower success rate. Furthermore, two physicians from this sample could not be reached for any follow-up communications because their publicly available contact information was outdated.

Contacting Potential Participants and Interview Scheduling

Potential participants were initially contacted through a study information package containing:

1) a cover letter from the NMP inviting them to participate
2) a one page project description
3) the informed consent form (Appendix A)
4) the interview guide (Appendix B)

This approach was used in order to provide physicians with information about the study that would assist them in deciding whether to participate. It also prepared them for the initial phone contact following their receipt of the package.

Interview Methodology

The data for this project were collected through key informant interviews, conducted between May 22nd and September 11th, 2007. Interviews were conducted at a location convenient for the participant, ranging from participants' practices, the Prince George Regional Hospital, at UNBC, and over the phone. Prior to each interview, participants signed a consent form to affirm they understood the intent and use of the research, as well as the voluntary nature of the interview. The interviewer also reviewed the confidentiality and anonymity conditions of the study and gave the participant the opportunity to ask any questions or express any concerns prior to beginning. Interviews lasted between thirty and sixty minutes each, and were audio recorded and transcribed. Detailed notes were also taken during the interview in order to back-up the audio recording, as well as to record the interviewer's interpretation of responses.

Description of the Interview Guide

The interview guide included mainly open-ended questions, but also included some close-ended questions in the form of checklists. The open-ended nature of the questions encouraged participants to express and explain various aspects of their practice environment both before and after the implementation of the NMP. The interview guide is attached in Appendix B

The first part of the interview asked about the participant's background including place of origin, years of practice as a physician, years of practice in Prince George, and where they attended medical school (questions A1 – A4).

The second part of the interview asked about factors of recruitment and retention, including both personal and professional reasons for coming to, and staying in Prince George (questions B1 – B6).

The third part of the interview explored various aspects of the practice environment in Prince George during the pre-NMP implementation period (pre-2004) (C1a – C5c).

Participants were asked to recall the availability and purposes of professional support networks, as well as availability and nature of support for managing workload. They were also asked about opportunities for professional interaction outside of their daily routine, opportunities and types of social interactions, as well as opportunities for, and ease of access to the use of continued medical education (CME). Furthermore, participants were asked to describe the status of morale, cooperation, trust, and a sense of community within the Prince George physician population during the pre-2004 period.

Subsequently, participants were asked to comment on how the same practice environment characteristics such as professional support, workload management, CME, morale, cooperation, trust, and a sense of community, had changed since the NMP's establishment in 2004 (questions D1a – D5c). When participants indicated a change, a follow-up question was asked about whether the NMP played a role in any changes. Participants were also asked about any perceived benefits of the NMP for their professional practice.

Section E (E1-E4) examined pressure points and stresses in physicians' professional life. Questions ranged from asking about experiences in a typical workday, to pressures and expectations coming from other personnel in the medical community. Participants were also asked whether the NMP is assisting in alleviating any stresses, and about any added demands the program may be creating that could be a challenge for the future.

The final section investigated participants' level of involvement with the NMP, including the role(s) they play, why they became involved, as well as any positive and negative aspects of being involved. For those not involved, they were asked whether they would like to be involved at some point, and why or why not they would like to be involved.

Prior to the full participant recruitment phase, the interview guide was field-tested and modified to reflect any necessary changes to wording or other problem areas.

Interview audio recordings were transcribed and sent for review by the participants. They were invited to indicate any requested edits on the hard-copy of the transcript and returned it to the research team. The edited, final transcript was then sent back to the participants for their records. An interview summary was compiled within an electronic copy of the interview guide, using the written back-up notes and transcript as a reference.

Method of Analysis

Qualitative analysis involved identifying, coding, and categorizing the patterns and themes from the data (Hycner 1999; Patton 1990). Responses were also compared with previous literature to improve the validity, and provide a wider generalizability, of the research (Eisenhardt 1995). This is particularly important since the findings are based on a limited number of interviews. Once patterns and themes were identified and categorized, responses were tallied in order to generate descriptive statistics.

While key informant data for this report gives totals for respondent answers to questions asked, in undertaking an analysis of these responses, it is typical to ask questions such as "what attracted new doctors to practice in Prince George?" As a result, the analysis was also carried out using a set of 'evaluative variables' that may point out differences from the 'overall' pattern of responses.

The evaluative variables include new physicians and specialists (practiced in Prince George for less than five years); long-time physicians and specialists (practiced in Prince George for at least ten years); physicians and specialists who come from small towns (less than 20,000 people); physicians and specialists who were recruited from the international community; and physicians and specialists who are not involved with the Northern Medical Program.

Limitations of the Study

The main limitation of the study is that the NMP has only been fully operational for a few years and its full effects on the professional quality of life of physicians in the community may not be fully experienced for several years. This research will nevertheless help us develop appropriate indicators and research protocols that can be used over time to examine the impacts of the program and will be an invaluable foundation of the formative years of the NMP.

Sampling for this research presented unanticipated issues. Clearly identifying the two populations for sampling purposes was challenging due to the gradient of involvement that exists throughout the physician population, in that some physicians were directly involved with the NMP, others participated on a more informal basis, and some were not involved at all. Because of the degree of overlap that was apparent between the two populations, drawing the non-NMP physician sample was less straightforward than expected because most physicians in Prince George are either directly or indirectly involved with the NMP.

The interview was also designed to take approximately one hour, but in many instances, had to be condensed into approximately thirty minutes given participants' time constraints. This limited the amount of detail that was collected, especially regarding the pre-NMP period since that section was merged with the follow-up, post-NMP questions. As such, some information was not captured at the same level of detail as the full, one-hour interviews.

The exploratory interview methodology provides insight into practice environment conditions for Prince George physicians before and since the implementation of the NMP. Key informants were selected for their ability to describe such characteristics as the extent of professional interactions and collaborations, opportunities for continued medical education, opportunities to work together to manage workload and other challenges, and involvement with the NMP. The interview guide was designed to explore these characteristics, and whether they have changed in recent years since the NMP's establishment. An exploratory, qualitative analysis was selected to identify patterns and

themes from the interviews, and responses were compared with previous literature to improve the validity, and provide a wider generalizability, of the research.

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APPENDIX A:

INTERVIEW CONSENT FORM

Principal Investigator: Dr. Neil Hanlon, Geography Program, UNBC, (250) 960-5881

Co-Investigators: Dr. Greg Halseth, Geography Program, UNBC, (250) 960-5826

Dr. David Snadden, Northern Medical Program, UNBC, (250) 960-6172

Dr. Chris Lovato, Health Care and Epidemiology, UBC, (604) 822-9251

Dr. Joanna Bates, Faculty of Medicine, UBC, (604) 827-3129

To be completed by the interviewer

Interviewer Name: _____

Date: _____

Place of Interview: _____

Interviewee Name and Contact Information: _____

Participant Population: _____

Interview Time: **Start:** _____ **Finish:** _____

Purpose of This Study: The objectives of this research project are to understand how the Northern Medical Program (NMP) has impacted the practice environment for physicians in Prince George, including such things as the conditions known to influence physician recruitment, retention, and professional support. This project is exploratory in nature and will provide baseline information for the ongoing monitoring of the effects of the NMP on your professional quality of life. The work will be carried out by a research team trained in qualitative interviewing, with a goal to provide researchers, policy makers, and health care planners in northern BC and across Canada, with information relevant to addressing the barriers to recruitment and retention in underserved areas.

How This Study is Conducted: We would like your participation in a face-to-face interview which will take approximately 30 minutes. We will schedule it at a time and location that is confidential and convenient for you. With your consent, we will tape and transcribe the interview to make sure we capture everything you say. We will provide you with a transcript to verify the accuracy of the transcription, and to suggest any revisions you deem necessary.

Why and How You Were Chosen: You have been invited to participate in this interview because of your potential to provide information about issues surrounding the professional quality of life of physicians practicing in Prince George. The contact information for all potential participants was obtained through publicly available sources (the local phone book and physician directories). This research is targeting two different groups of physicians:

1) Members of Prince George's physician community with at least 4 years of practice in the community and who have some level of involvement with the NMP; and

2) Members of Prince George's physician community with at least 4 years of practice in the community and who are not involved with the NMP.

Anonymity and Confidentiality: The anonymity and confidentiality of participants will be respected. All of the information shared in the interview including interview tapes, transcripts, and researchers' notes will be kept in a locked research room at UNBC, and held within strict confidence of the Principal Investigator Dr. Neil Hanlon, Co-Investigators Dr. Greg Halseth and Dr. Chris Lovato, and Research Assistants. Computer files will be password protected, and code numbers (not participant names) will be used. No data will be linked to individuals in the research database. Individuals will not be identifiable in the analysis of data, nor in any research reports or other dissemination activities.

The information will be kept until the research team completes the analysis of results. All original data from this research will be retained in a securely locked research room at UNBC until after the results are disseminated. At this time, all documents and materials related to the interview including tape recorded information, transcripts, and researchers' notes will be destroyed. Databases housing information from the study will be kept for at least 5 years.

Potential Risks and Benefits: This project has been assessed by the Research Ethics Board of UNBC. The research team considers this project to be of no risk to participants. Potential participants can reasonably expect that possible harms from participating in this research will be no greater than those encountered in their everyday life. By participating in this research project you will have the opportunity to voice your successes and concerns about the Northern Medical Program (NMP) in Prince George, namely by reflecting on any impacts on your professional quality of life; expressing how you feel about the medical community in Prince George; and discussing issues related to the NMP's contribution to various aspects of attracting and keeping physicians here.

Voluntary Participation: There is no remuneration for participating in this research project. Participation in this research is entirely voluntary and, as such, you may choose not to participate. If you participate, you may choose not to answer any questions with which you feel uncomfortable. You have the right to withdraw from the interview at any time and all information you provided will be removed from the study and destroyed.

Research Results: You will be provided with an Executive Summary of the final research results.

Contacts for information about the study: If you have any questions about this research please feel free to contact Dr. Greg Halseth at (250) 960-5826, and Dr. Neil Hanlon at
(250) 960-5881, both of the UNBC Geography Program.

Contacts for Complaints or Information about the Rights of Research Subjects: If you have any complaints or concerns about this study or the interview, please contact UNBC's Office of Research, (250) 960-5820, reb@unbc.ca.

Sponsor: This research was made possible through a grant awarded by the BC Medical Services Foundation.

I have read the above description of the study and I understand the conditions of my participation. My signature indicates that I agree to participate in this study.

(Name – please print) **(Signature)** **(Date)**

I have received a copy of the signed Informed Consent Form, a Project Description, and the Interview Guide.

(Name – please print) **(Signature)** **(Date)**

APPENDIX B:

INTERVIEW GUIDE

INTERVIEW GUIDE

Section A: Background Information Questions

The first section of questions asks you about your background and how long you have practiced in Prince George.

A1. How many years have you practiced as a physician? __ years.

A2a. How many years in total have you practiced in Prince George? __ years.
A2b. Are these consecutive years?

A3. Where are you originally from? (*Prompt:* before attending medical school)

A4. Where did you go to medical school?

Section B: Work-related and Other Pull Factors

The next questions ask you about what made you want to (come / return) to Prince George.

B1. Did you (come / return) to Prince George because you got a job here?

B2. Were you recruited to work in Prince George?

B3. Was it by a colleague or a professional group?
Colleague __
Professional Group ___
Prompts: Medical association (name of association) _____
Physicians' society (name of society) _____

B4. Can you describe some of the work-related "pull-factors" (things that made it attractive for you to come)?
Prompts: Salary incentives
Opportunities to expand skills

B5. What were some of the non-work reasons that made it attractive for you to come?

► And do any of these possible reasons apply to you as well?

	Yes	**No**
Have family here		
Have friends here		
Employment opportunities for spouse and /or other family members		
Leisure opportunities		
Ample green space / natural surroundings		
Sufficient amenities (shops, restaurants, services)		
Accessible / available health care		
Low cost of living		
More relaxed pace than a larger city		
Good place to raise a family		
Good schools for children		
Climate		

B6. Since starting your practice in Prince George, what are some of the reasons you have *stayed* here?

Prompts:

Work-related reasons:
Opportunities to expand skills
Salary incentives

Non-work-related reasons:
More relaxed pace than a larger city
Low cost of living
Ample green space / natural surroundings

<u>Section C: Pre-NMP implementation period.</u>

Now I'd like you think back 4 or 5 years and I am going to ask you about different aspects of the practice environment in Prince George.

C1a. What kinds of professional support networks were available to you?

Prompts: A network of physicians to turn to for professional advice
Access to other physicians to share successes, challenges, to vent or express concerns

Prompt: What were their purposes?

C1b. Is there anything else you would like to share about your professional support networks 4 or 5 years ago?

C2a. What professional support was available to you to help manage your workload?

Prompts: Access to other physicians to cover your shifts in an emergency, during holidays, for professional travel, other absences, etc
Access to other physicians to share on-call duties

C2b. Is there anything else you would like to share about managing workload back then?

The next few questions are about professional interaction.

C3a. What opportunities were there for professional interaction outside of your daily routine?

Prompts: Professional committees
Research groups
Local chapters of medical societies, associations or other local professional groups of that nature

C3b. Were there opportunities to become involved in any social activities with your colleagues?

C3c. Is there anything else you would like to share about professional interaction in the past?

Next I would like to ask you about opportunities to keep up with the latest developments in practice.

C4a. What local opportunities were there to keep up with the latest developments in practice?

Prompts: Continued medical education (any type; not only post-graduate courses)
Sharing or accessing information within informal networks of colleagues, through committees, or through research groups

C4b. Was it relatively easy to access and obtain information locally on the latest research developments or practice?

C4c. Is there anything else you would like to share about local access to information regarding the latest developments in practice around 4 or 5 years ago?

I would like to focus now on the sense of community and cooperation among Prince George physicians.

C5a. How would you describe the morale of Prince George physicians around working conditions and practice?

C5b. Among the Prince George physician population, did you feel there was generally a:
i) sense of cooperation?
ii) sense of trust?
iii) sense of community?

► Did you feel ***personally*** **connected** to this "community"?

C5c. Is there anything more you would like to say about the sense of community, trust, and cooperation back then?

Section D: NMP full operation period

The next questions ask about the same work environment characteristics that we just covered but in the last couple of years.

D1a. Have your professional support networks changed at all?

Prompts: A network of physicians to turn to for professional advice
Access to other physicians to share successes, challenges, to vent or express concerns

Prompt: What were the purposes of these networks?

Prompt: Do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

D1b. Is there anything else you would like to share about changes in your professional networks over the last few years?

D2a. Have you noticed any changes in the professional support available for managing your workload?

Prompts: Access to other physicians to cover your shifts in an emergency, during holidays, for professional travel, other absences, etc.
Access to other physicians to share on-call duties

Prompt: Do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

D2b. Is there anything else you would like to share about changes in managing workload in recent years?

The next few questions are about professional interaction.

D3a. Have you noticed more opportunities for professional interactions outside of your daily routine?

Prompts: Professional committees
Research groups
Local chapters of medical societies, associations or other local professional groups of that nature

Prompt: Do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

D3b. Have you noticed more opportunities to become involved in any social activities with your colleagues?

Prompt: Do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

D3c. Is there anything else you would like to share about changes in professional interactions in the last few years?

Next I would like to ask you about opportunities to keep up with the latest developments in practice.

D4a. Have you noticed any change in local opportunities to keep up with the latest developments in practice?

Prompts: Continued medical education
Sharing or accessing information within informal networks of colleagues, through committees, or through research groups

Prompt: Do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

D4b. Have you noticed any change in the ease of accessing and obtaining information locally on the latest research developments or practice?

Prompt: Again, do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

D4c. Is there anything else you would like to share about changes in local access to information regarding the latest developments in practice in the last few years?

I would like to focus now on the sense of community and cooperation among Prince George physicians.

D5a. Among Prince George physicians, have you noticed any changes in:

i) the morale around working conditions and practice?

Prompt: Do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

ii) a sense of cooperation?

Prompt: Again, do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

iii) a sense of trust?

Prompt: Do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

iv) a sense of community?

► Have you noticed any changes in your sense of ***personal*** **connection** to this "community?"

Prompt: Again, do you think the NMP played any role in that? (ONLY ASK IF "YES THERE'S BEEN A CHANGE")

D5b. What do you perceive to be the benefits of the NMP, if any, for your professional practice in Prince George? Please explain.

D5c. Is there anything more you would like to say about the sense of community and cooperation in the Prince George physician community in the last few years?

Section E: Pressure points/stresses

The next questions ask about some of the stresses and pressures you may experience in your professional life.

E1. During a typical workday, what are some stressors you experience that impact your professional quality of life?

► Any concerns with…

	Yes	No
Heavy patient load		
Insufficient time to build strong physician-patient relationships		
Long work hours		
Too much paperwork		
Lacking access to and / or availability of necessary technologies		
Solicitation from pharmaceutical or other sales representatives		
High volume of phone calls		
Concern / worry about malpractice		
Demanding / difficult / rude patients		
Patient complaints about wait times		
Patient complaints about not being able to find a doctor		
Patient complaints about continuity of care		

E2. What are some of the professional pressures or expectations from others in the medical community that you experience?

► And what about…

	Yes	No
Pressure to accept new patients		
Pressure to work longer hours		
Pressure to participate in committees or other professional organizations		
Pressure to partake in research activities / publish		
Pressure to partake in continued medical education		
Pressure to attend conferences		

E3. How is the NMP assisting in alleviating any of these pressures?

E4. What, if any, added pressures is the NMP creating which could be a challenge in the future?

Section F: Involvement with the NMP

This last set of questions ask about your involvement with the NMP.

F1. Are you involved with the NMP in any way?

Yes ___ → In what capacity are you involved?
No ___ → Do you wish to become involved?
Yes ___
No ___
Please explain why / why not. (Skip to Section G: Closing)

F2. Why did you become involved?

F3. What are the positive aspects of being involved?

F4. Are there any negative features to your involvement?

Prompt: Added time commitments to busy schedules
Costs in terms of other financial / non-financial resources

► Were any of these issues unanticipated?

Section G: Closing

In closing, are there any other comments you wish to make about the NMP and the Prince George physician population?

Thank you.

APPENDIX C:

DATA FROM KEY INFORMANT INTERVIEWS

SECTION A: WORK-RELATED AND OTHER PULL FACTORS

Table A1: Did you come to Prince George because you got a job here?

	# of respondents	% of respondents
Yes	18	90.0
No	2	10.0
N=	20	

Source: The NMP Impact Study 2007.

Table A2: Were you recruited to work in Prince George?

	# of respondents	% of respondents
Yes	9	47.4
No	10	52.6
N=	19	

Source: The NMP Impact Study 2007.

Table A3: Was it by a colleague or professional group?

Not Recruited (10)
Came as locums & stayed (3)
Completed residence & stayed (new system) (2)
Family (2)
Friends (2)
Previous interns (2)
Former classmates (1)
Personal initiative – advertisements (1)
Personal initiative - Internet searches (1)
Personal initiative - phone calls (1)

Recruited (9)
Colleagues (6)
Professional group (3)

Source: The NMP Impact Study 2007.

Table A4: Can you describe some of the work-related 'pull-factors' that made it attractive for you to come?

Job Satisfaction / Flexibility (16)
Engaging broader skill sets than larger centres (emergency, surgical skills, obstetrics, etc.) (9)
Flexibility in organizing / operating family practice (3)
Dislike of other health care systems (2)
Efficient operations (1)
Opportunities for promotion / advancement (1)

Support Networks (14)
Supportive / collegial medical community (11)
Access to specialists (2)
Medical system is electronically networked (1)

Employment (8)
Offered job / locum position (5)
Abundance of work (2)
Opportunities for spouse within the medical community (1)

Northern Medical Program (7)
Opportunities to teach / conduct research (5)
Opportunity to be part of something new (1)
NMP source of constant CME (1)

Social Networks (6)
Knew GPs / specialists (3)
Size of medical community (3)

Educational Opportunities (2)
Access to CME (2)

Financial Opportunities (2)
More money (1)
Rural Subsidiary Agreement (1)

Other (2)
Single-tier public health system (1)
Opportunity to make a difference (1)

None (1)

Source: The NMP Impact Study 2007.

Table A5: Can you describe some of the non-work-related 'pull-factors' that made it attractive for you to come?

Recreational / Social Opportunities (61)
Leisure opportunities (15)
Downhill skiing (6)
Fishing (4)
Hiking (4)
Outdoor activities (general) (6)
Cross-country skiing (3)
Symphony (3)
Canoeing (2)
Climbing / mountaineering (2)
Soccer (2)
Arts community (1)
Choir (1)
Dance lessons for kids (1)
Golf (1)
Hockey (1)
Kayaking (1)
Mountain biking (1)
Performing arts (1)
Road cycling (1)
Snowboarding (1)
Swimming lessons for kids (1)
Walking (1)
Winter activities (1)
White water rafting (1)

Community Assets (28)
More relaxed pace than a larger city (14)
Move to a larger city (2)
Good place to raise a family (8)
Northern community (2)
Close proximity to countryside (1)
Friendly people (1)

Environmental Assets (23)
Outdoors / natural surroundings (16)
Climate (6)
Snow (1)

Availability of Services (22)
Amenities (shopping, transportation, etc.) (11)
Good schools for children (7)
University (2)
College (1)
French immersion (1)

Social Networks (17)
Friends (10)
Family (5)
Church community (1)
Presence of ethnic community (1)

Cost of Living (11)
Low cost of living (general) (10)
Low cost of housing (1)

Employment (6)
Employment opportunities for spouse (6)

Health Care Services (5)
Availability of health care (5)

Other (3)
Escape violence of former community (1)
Presence of aboriginal population (1)
Wanted to go west (1)

Source: The NMP Impact Study 2007.

Table A6: What are some of the reasons you have stayed here – work-related?

Job Satisfaction (21)
GPs have broader range of responsibilities (good for gaining experience) (11)
Ease of establishing practice (3)
Colleagues trust your judgement (1)
Few restrictions to practice medicine (1)
Flexibility in running family practice (2)
Medical community is not political (1)
No competition / fighting for work (1)
Can make a difference (1)

Support Networks (20)
Collegial medical community (13)
Being linked to the University of BC (2)
Get along with medical staff (3)
Wide network of non-medical support staff (1)
Familiarity with networks & surroundings (1)

NMP (7)
Teaching opportunities (4)
Being part of the NMP (2)
Government interest in medical program (1)

Financial Opportunities (3)
Financial incentives – general (2)
Adequate financial compensation for being on-call (1)

Educational Opportunities (2)
Access to CME / professional growth (1)
Learning from colleagues (1)

Employment (1)
Abundance of work (1)

Social Networks (1)
Social interaction between GPs (golfing, dinner, etc.) (1)

Source: The NMP Impact Study 2007.

Table A7: What are some of the reasons you have stayed here – non-work-related?

Community Assets (25)
Prince George not too large (6)
Good, friendly community (5)
Close proximity to countryside (2)
Good place to raise family (3)
Convenience of living in a smaller centre (3)
Welcoming town (2)
Centrally located city (1)
Growing city (1)
More relaxed pace than a larger city (1)
Northern community (1)

Recreational / Social Opportunities (17)
Amenities (3)
Leisure opportunities (2)
Symphony (2)
Access to outdoor activities (1)
Active arts community (1)
Canoeing (1)
Kayaking (1)
Participating in local activities (2)
Skiing (2)
Winter activities (1)
Golf (1)

Social Networks (9)
Family / aging family here (4)
Friends (3)
Neighbours (1)
Presence of ethnic community (1)

Availability of Services (6)
Educational opportunities at UNBC (3)
Education opportunities (general) (1)
French immersion (1)
Proximity to airport (1)

Cost of Living (6)
Low cost of living (4)
Low housing prices (2)

Environmental Assets (6)
Climate (2)
Outdoors (3)
Green space / natural surroundings (1)

Employment Opportunities (3)
Employment for spouse (3)

Other (1)
Debt didn't allow respondent to leave (financial restrictions) (1)

Source: The NMP Impact Study 2007.

SECTION B: DEVELOPING HUMAN AND SOCIAL CAPITAL AMONGST THE PHYSICIAN COMMUNITY

Table B1a: What kinds of professional support networks were available to you?

Positive – Formal (19)
Northern Medical Society (3)
BC Medical Association (2)
Referrals (2)
BC Centre for Disease Control network (1)
Canadian Medical Protective Association for legal advice (1)
College of Physicians & Surgeons (1)
Guest speakers sponsored by drug companies (1)
Locums (1)
Medical assistant (1)
Medical director (1)
OB / GYN department – Vancouver (1)
Provincial physicians support program hotline (1)
Residency program / faculty (1)
UBC medical program (1)
Wellness Committee (1)

Positive – General Comments (5)
Collegial, supportive medical community (4)
Community in general (1)
Flexibility (1)
Mutual respect (1)
No infighting (1)

Positive – Informal (16)
Colleagues (general) (7)
Advice (general) (2)
Communicate with specialists (2)
Advice for ordering tests (1)
Call group (1)
Corridor consultations (1)
Discussing cases (1)
Learning from other GPs / specialists (1)

Negative (7)
Lack of specialists (2)
Decline / exodus of specialists / GPs (1)
Lack of time (1)
Limited network (1)
Longer waitlists (1)
Low ratio of GPs to specialists (1)

Source: The NMP Impact Study 2007.

Table B1b: Have your professional support networks changed at all?

	# of respondents	% of respondents
No change	10	43.5
Decline	3	13.0
Improvement	9	39.1
Mixed	1	4.3
N=	23	

Source: The NMP Impact Study 2007.

Table B1c: Changes in professional networks

Positive (32)
Availability of Human Resources (8)
Increase in specialists (2)
NMP brought residents – source of support (2)
Discipline Specific Site Leader (1)
More colleagues in general (1)
Professional mentors (i.e. general surgeons) (1)
Professional support locally & in Vancouver for coping with NMP problems (1)
Enhanced Operations (8)
Exposed local medical staff to larger medical groups & academic organizations with certain expectations about supports attached to institutions (2)
New academic roles for some GPs (2)
More accountability within medical staff organization (1)
Physician wellness program is more formalized & active (1)
Shared practice (1)
Staff roles are more clearly defined (1)
Access to Support Services (4)
Colleagues are helpful (1)
Increase in support services (home care, psychiatry, paramedical) (1)
More liaison with colleagues in general (1)
Partner involved in the NMP (1)
Enhanced Cooperation (3)
Closer cooperation with Department of OB / GYN (1)
Closer cooperation with UNBC (1)
UBC support to establish UNBC role in NMP (1)
Access to Information (2)
Hospital library (1)
Opportunities to expose students to specialties (1)
Improvements in Understanding (2)
Sharing stresses associated with teaching (1)
UBC recognized value of smaller centres like PG to teach surgical skills (1)
Improved Relations (2)
Better relationship with Northern Health Authority (1)
Better relations with change in government (1)
Access to Resources (1)
Formal teaching support available (1)
Development of New Networks (1)
NMP created new networks (1)
Human Resource Development (1)
Attending faculty development sessions (1)

Negative (23)
Limited Human Resources (5)
Lack of specialist support for GPs (2)
Low ratio of GPs to specialists (1)
Reduced nursing staff (1)
Exodus of GPs / specialists expanded workload (1)
Operational Problems (5)
Specialists assign OR assistants, consultations, etc. to residents instead of GPs unless GPs request to assist with patient's operation (2)
Caught between bureaucrats & referral system (1)
Expansion of bureaucracy (1)
Lack of coherency (1)
Lack of Communication (2)
More public relations for NMP compared to the residency program (1)
Specialists communicate less directly with GPs (1)
Lack of Resources (2)
No proper operating rooms (1)
Shift in resources from teaching residents to teaching undergraduate students (1)
Lack of Social Interaction (2)
Face-to-face contact has (1)
No rounds for some specialties (1)
Lack of Awareness (1)
Do not know who is who (1)
Psychological Problems (1)
More stress (1)
Service Reductions / Closures (1)
Reduced beds (1)
Other (4)
Lack of time (2)
Limited trust in capabilities of foreign GPs (1)
Respondent reducing involvement in practice (1)

No Change (2)
Networks already established (2)

Source: The NMP Impact Study 2007.

Table B2a: What professional support was available to you to help manage your workload?

Positive – Formal (24)
Medical office assistants (5)
Locums (4)
Sharing practice (3)
Referrals to specialists (2)
Intersect (Psychiatry) (2)
On-call GPs / specialists (2)
Paramedical (2)
Admitting department (1)
Sharing cases amongst specialists (1)
Support for NMP position (1)
Wellness Committee (1)

Positive – Informal (7)
GPs manage their own workload (3)
Flexibility for managing time off (2)
Flexible workload (1)
Supportive colleagues (1)

Negative (10)
Limited locum access (4)
Increase in administrative tasks (1)
Lack of beds (1)
Lack of GPs to provide continuous coverage (1)
Lack of professionals in child psychiatry (1)
Lack of specialists (1)
Support limited – unsustainable service delivery expectations (1)

None (1)

Source: The NMP Impact Study 2007.

Table B2b: Have you noticed any changes in the professional support available for managing your workload?

Negative (43)
Operational Challenges (17)
Teaching expanded workload (6)
Depends on distractions between office & hospital (1)
Fewer locums / GPs willing to do emergency / geriatrics / obstetrics (1)
Increasing administration demands formerly done by Department Head (1)
Increased administration tasks related to teaching (1)
Long wait lists (1)
More meetings with UBC (1)
NMP roles means less flexibility to manage practice (1)
Reduced time in the OR (1)
Teaching means less flexibility around holidays / time off (1)
Teaching / training means support fluctuates – difficult to manage health care services (1)
Workload divided into clinical & academic leads (1)
Lack of Human Resources (17)
Difficult to get locums (6)
Difficult to get GPs to fill in for practice who don't want to teach (2)
Fewer emergency GPs (2)
Difficulty replacing office staff (1)
Lack of child psychiatrists (1)
Lack of nurses (1)
Lack of designated staff to fulfill specific roles (1)
Lack of specialists (1)
Lack of staff to calibrate equipment (1)
Lack of staff to organize things (1)
Limited Resources (4)
Lack of hospital resources for educational activities (1)
Lack of resources for referral services (1)
Lack of resources for technology (1)
Lack of support for course preparation (1)
Infrastructure Problems (2)
Lack of beds (1)
Fewer long-term care beds (1)
Financial Challenges (1)
Locums don't want to pay overhead costs (1)
Other (2)
Patients complaints (1)
Lack of awareness about where things are in the hospital (1)

Positive (27)
Human Resource Support (11)
Improved recruiting (3)
NMP is attracting GPs / specialists (2)
Easier to get locums (1)
More specialists (1)
More surgeons (1)
New psychogeriatric assessment team (1)
NMP staff assist with IT & photocopies (1)
Residents are a constant source of locums (1)
Improved Operations (5)
Faster access to specialists (1)
Introduction of provincial locum programs (1)
More collaborative approach with hospital administration (1)
Reduced expectation to be on call for specific disciplines (1)
Shared workloads (1)
Financial Support (3)
Financial support for NMP academic lead position (1)
Introduction of on call payment (1)
Less financially onerous to assist with locum costs (1)
Technology Support (2)
NMP support with IT & photocopying (1)
Support for Physician Connect program (1)
Information Sharing & Support (1)
NMP provides teaching materials (1)
Infrastructure (1)
Cancer treatment centre approved (1)
Other (4)
Workload is managed by each individual (3)
Support for NMP involvement (1)

Source: The NMP Impact Study 2007.

Table B3a: What opportunities were there for professional interaction outside of your daily routine?

Committees / Meetings (12)
Committee meetings (5)
Departmental meetings (2)
Meetings (3)
Health Match BC – recruitment committee (1)
Medical advisory committee (1)

Educational Opportunities (8)
CME events (5)
Courses (1)
Practice-based learning group (1)
University-based study group (1)

On-the-Job Activities (8)
Friday rounds (3)
Hospital duties (3)
Discuss cases with colleagues (1)
Walk-in clinic (1)

Formal Social Opportunities (7)
Drug company sponsored dinners (2)
Northern Doctor's Day (2)
Bob Ewert Memorial dinner (1)
Events (general) (1)
Jasper retreat (1)

Informal Social Opportunities (5)
Corridor consultations (2)
Doctor's lounge (2)
Lawn area & coffee (1)

Organizations (4)
College of Physicians & Surgeons (1)
BC Medical Association (1)
Northern Medical Society (2)

Other (5)
Don't use them (2)
Difficult with few colleagues (1)
Lack of time (1)
Road show activities (1)

Source: The NMP Impact Study 2007.

Table B3b: Have you noticed more opportunities for professional interactions outside of your daily routine?

	# of respondents	% of respondents
No change	9	42.9
More opportunities	10	47.6
Fewer opportunities	1	4.8
Don't know	1	4.8
N=	21	

Source: The NMP Impact Study 2007.

Table B3c: Have you noticed more opportunities for professional interactions outside of your daily routine?

Positive (33)
NMP (27)
Interacting with students (2)
NMP faculty development (3)
Teaching (3)
Interaction with academics (2)
Mentoring (2)
NMP is another source of networking / interaction (2)
NMP social events (1)
Community Health Program (1)
Discipline Specific Site Leader job gives more opportunities (1)
Infrastructure for continuing support as a teacher (1)
Interactions via the accreditation process – visiting medical evaluation team (1)
Interaction with GPs outside of PG while developing lectures (1)
More interactions regarding education issues (2)
NMP committees (2)
Problem-based learning groups (1)
Teacher support group (1)
UNBC mini lectures & lunch to support teachers (1)

Continuing Medical Education (4)
More organized rounds (2)
Committees for residency program (1)
Society of Obstetricians & Gynecologists established local education activities for GPs, nurses, midwives, & residents (1)
Professional Groups (2)
BCMA session on Northern Improvement (1)
Surgery club (1)

Negative (10)
Life Stage (3)
Family obligations (2)
Due to aging, reducing workload (1)
Operational Challenges (2)
Responsibilities are unclear for mentors (1)
Don't have predictable schedule to facilitate student participation (1)
Limited Interaction (1)
Less interaction amongst GPs – i.e. hospital lawn area (1)
Other (4)
Limited time to pursue them (2)
Depends on individual interests (1)
Do not know what is available (1)

Source: The NMP Impact Study 2007.

Table B4a: Were there opportunities to become involved in any social activities with your colleagues?

	# of respondents	% of respondents
Yes	12	75.0
No	1	6.3
Other	3	18.8
N=	16	

Source: The NMP Impact Study 2007.

Table B4b: Were there opportunities to become involved in any social activities with your colleagues?

Recreation (11)
Skiing (4)
Collegiality through sports (1)
Golf (2)
Hockey (1)
Fishing (1)
Soccer (1)
Water activities (1)

Informal Social Opportunities (11)
Informal dinners (4)
Theatre (2)
Community events (1)
Doctors' lounge (1)
Pub nights (1)
Social activities (general) (1)
Visiting homes (1)

Formal Social Opportunities (10)
Jasper retreat (5)
Northern Doctors' Day (3)
Bob Ewert Memorial dinner (1)
Social CME functions (1)

Other (7)
Pursue own social life (2)
GPs are too busy (1)
Family life (1)
Friends / colleagues left Prince George (1)
Lack of interaction between GPs (1)
Lack of interest in social activities (1)

Source: The NMP Impact Study 2007.

Table B4c: Have you noticed more opportunities to become involved in any social activities with your colleagues?

Positive (26)
Formal Social Activities (18)
NMP social functions (general) (5)
Bob Ewert Memorial dinner (4)
Wine & cheese with new medical students (2)
BC Medical Association organized session on Northern Improvement (1)
Northern Doctors' Day (1)
Northern Medical Society sponsored lectures (1)
GPs sponsor student rooms for Jasper retreat (1)
Surgery club (1)
UNBC graduate ceremony (1)
UNBC staff appreciation barbeque (1)
Informal Social Activities (5)
Informal conversations at UNBC campus (1)
Informal interaction with students (1)
Personal dinners with students & colleagues (1)
Pub nights (1)
Welcoming students (1)
Other (3)
Depends on individual interests (1)
More frequent opportunities (1)
Social activities – general (1)

Negative (14)
Life Cycle (3)
Busy with family life (2)
Generation gap between GPs & students (1)
Other (11)
Lack of time (4)
Social life is separate (2)
Activities are not advertised (1)
Becomes another meeting / another dinner (1)
Don't feel important enough to attend events (1)
Limited social activities (1)
Not on the same scale as the Northern Medical Society organized before (1)

No change (8)

Source: The NMP Impact Study 2007.

Table B5a: What local opportunities were there to keep up with the latest developments in practice?

Formal Educational Opportunities (18)
CME (12)
Guest speakers (3)
Courses (1)
Local CME coordinator (1)
National College of Family Physicians – study group (McMaster University) (1)

On-the-Job Learning (17)
Rounds (5)
Friday rounds (3)
Surgery rounds (2)
Colleagues teaching each other (1)
Departmental rounds (1)
Discussing cases with other colleagues (1)
Discussions with specialists (1)
Learning from consultation reports (1)
Monday medical rounds by residents (1)
Orthopaedic rounds (1)

Events (7)
Events hosted by drug companies (4)
Conferences (2)
Northern Doctors' Day (1)

Technology (5)
On-line data access – electronic medical records (2)
Internet (1)
On-line journals (1)
Up-to-date (1)

Hard Copy Materials (4)
Journals (3)
Hospital library (1)

Committees / Meetings (2)
Meetings (1)
Tissue & Audit committee (self-governance of hospital accreditation process) (1)

Informal Interaction (1)
Doctors' lounge (1)

Other (3)
Representatives from pharmaceutical companies (1)
Personal reading (1)
Librarians doing literature searches (1)

Negative (2)
Cautious about side effects of new advances (1)
Too busy (1)

Source: The NMP Impact Study 2007.

Table B5b: Have you noticed any change in local opportunities to keep up with the latest developments in practice?

	# of respondents	% of respondents
More opportunities	15	60.0
Decline in opportunities	1	4.0
No change	8	32.0
Don't pursue	1	4.0
N=	25	

Source: The NMP Impact Study 2007.

Table B5c: Changes in local opportunities to keep up with the latest developments in practice

Positive (52)
Continuing Medical Education (17)
More organized rounds (4)
More CME (4)
Guest speakers have academic credentials (3)
Aging staff acquire experience (1)
Courses (1)
Lectures (1)
Medical community is big enough to deliver courses (1)
Society of Obstetricians & Gynecologists established education program for GPs, nurses, midwives, & residents (1)
UBC Continued Professional Development & Knowledge Transfer (1)
Technology (11)
Use of Up-to-Date website (3)
Video conferences at the hospital & UNBC (2)
Easier to access the Internet, etc. (1)
Easier to access lab / x-ray results (1)
Easier to access patient records (1)
Easier to access / update medical information (1)
Teleconferencing (1)
UNBC health sciences librarian has taught GPs about online meta-analysis & searching (1)
Teaching (8)
Students inspire GPs to keep learning (2)
Faculty development sessions (1)
Mentoring (1)
Medical students present research on cases (1)
More academic activities for training residents (1)
Teaching (1)
Working with UBC on delivering education / meet standards (1)
On-the-Job (6)
Greater variety of rounds (surgery, paediatrics, internal medicine, emergency) (2)
More opportunities to meet as a department & discuss interesting cases (2)
Problem-based learning (1)
Surgeons are briefing better (1)
Human Resources (4)
More specialists (4)
Infrastructure (2)
Medical library (1)
Library card (1)
Meeting Places (2)
Professional meetings (1)
Wall of events at doctors' lounge (1)
Events (1)
Conferences (1)
Financial Support (1)
Improved funding for CME (1)
Programs (1)
DPAS program (Doctor, Patient, & Society) (1)
Support (1)
UNBC Department of Gynecology support with cancer identification & treatment program (1)

Negative (13)
Limited Local Educational Opportunities (3)
Limited educational opportunities in BC for specific medical fields (2)
Not possible to study for Royal College exam in PG (for foreign GPs) (1)
Closure of Programs (2)
Up-to-Date was stopped (2)
Geographic Isolation from Colleagues (2)
Isolation leads to limited interaction with others in your field (2)
Other (5)
Depends on whether or not you have time to be involved (1)
Examples of latest advances have been bad for people. Wait for 2nd or 3rd advance (1)
It's a personal responsibility (1)
Not involved with teaching (1)
Not involved with volunteering (1)
Recommendation (1)
Provide limited registration for immigrant GPs / specialists to practice in the North (1)

Source: The NMP Impact Study 2007.

Table B6a: Was it relatively easy to access and obtain information locally on the latest research developments or practice?

	# of respondents	% of respondents
Yes	9	75.0
No	1	8.3
Don't look for it	2	16.7
N=	12	

Source: The NMP Impact Study 2007.

Table B6b: Factors that made it Easy to Access and Obtain Information Locally on Research Developments / Practice

Technology (12)
Internet (4)
Up-to-Date (online decision support tool) (2)
Electronic medical records (1)
E-MED (1)
Fax machines (1)
MD Briefcase (1)
Teleconferencing (1)
Videoconferencing (1)

Informal Interaction (5)
Sharing information amongst GPs / specialists (2)
Informal corridor consultations (1)
Constant interaction with colleagues (1)
Local networks (general) (1)

Hard Copy Materials (3)
Journals (2)
On-line journals (1)

Support Networks (3)
Hospital librarian doing literature searches (1)
Meetings (2)

Infrastructure (1)
Hospital library (1)

Other (1)
Takes time to familiarize with departments & personnel (1)

Difficult to Access Information / Educational Opportunities (3)
Cadavers not available for CME (1)
Few local meetings (1)
Limited number of specialists for CME (1)

Source: The NMP Impact Study 2007.

Table B6c: Have you noticed any change in the ease of accessing and obtaining information locally on the latest research developments or practice?

Technology (18)
Electronic medical records (5)
Internet (4)
Use of videoconferencing (2)
Easier access to x-ray results (1)
Easier to access lab results (1)
Electronic-based decision tools (1)
Electronic media (1)
Internet available in all rooms (1)
More journals are online (1)
Upgrading within the office (1)

Information Support (10)
UNBC health sciences librarian (2)
Access to library loans (1)
Access to UBC libraries (1)
Hospital library (1)
Materials sent to help with teaching (1)
More availability of information (1)
More faculty development oriented at teaching (1)
NMP staff support with IT / photocopying (1)
UNBC library (1)

Improved Availability of Opportunities (6)
Meeting with international practice leaders (1)
Academic access has improved with NMP (1)
Availability of CME improved (1)
Medical staff meetings about primary care (1)
More regular CME (1)
UBC Cont'd Professional Dev. & Knowledge Transfer (1)

Equipment & Supplies (2)
Equipment is Up-to-Date (1)
Use of NMP cadaver lab for courses (1)

Financial Support (2)
Improved funding for CME (2)

Improved Efficiency in Operations (2)
Central referral system developed (1)
Improved access to Mental Health (1)

Enhanced Capacity (1)
Have the facility to do more with a growing city & better recruitment (1)

Promotion of Opportunities (1)
Receive flyers about lectures (1)

Other (3)
Depends on access to locums (2)
It is a personal responsibility (1)

Negative (2)
Difficult to access information locally because specialty is so specific (1)
Less access to specialists (1)

Source: The NMP Impact Study 2007.

Table B7a: How would you describe the morale of Prince George physicians around working conditions and practice?

	# of respondents	% of respondents
Low morale	8	50.0
Good morale	6	37.5
Mixed	2	12.5
N=	16	

Source: The NMP Impact Study 2007.

Table B7b: Morale of Prince George physicians concerning working conditions and practice

Negative (27)
Human Resource Problems (10)
Decline in GPs (2)
Problems recruiting / retaining specialists (5)
Drop in critical numbers to support on call group (1)
Lack of administrative leadership (1)
Working in emergency with no consultants in various disciplines (1)
Operational Problems (7)
Overloaded (1)
Overworked (1)
Pressure to find other hospitals to assist patients (2)
Capacity of hospital to deliver care (1)
Overcrowding of the emergency (1)
Working weekends on call (1)

Strained Relationships (7)
Bad relations with government (1)
General discontent amongst GPs (1)
Negative relations between GPs & Northern Health Authority (1)
Negative relationship between GPs & administration (1)
Patients did not understand why treatment was unavailable (1)
Problems between GPs & specialists (1)
Strained relations between GPs & the BC Medical Association (1)
Limited Availability of Resources (2)
Limited resources for "regional" hospital (2)
Financial Constraints (1)
Salaries reduced – budget caps (1)

Positive (13)
Positive Working Relations (13)
Cooperation (3)
Rally helped people to work together (2)
No competition (1)
No divisions (1)
Smaller teaching load with residents (1)
Collegial network of GPs (3)
Friendliness (2)

Source: The NMP Impact Study 2007.

Table B7c: Among Prince George physicians, have you noticed any changes in the morale around working conditions and practice?

	# of respondents	% of respondents
No change	2	8.3
Increase in morale	9	37.5
Decline in morale	11	45.8
Mixed	2	8.3
N=	24	

Source: The NMP Impact Study 2007.

Table B7d: Changes in the morale around working conditions and practice

Negative (48)
Operational Challenges (26)
Stress associated with teaching load (5)
Burnout (3)
Bed closures (2)
Increased workload (2)
More time to train medical students than residents (2)
Students spending less time in each specialty (1)
BC Medical Assoc. dictates operations without sufficient support (1)
Difficulty accessing specialists (1)
Difficulty training students in emergency (1)
Less time available to teach residents (1)
Limited OR time (1)
Long waitlists for knee surgery (1)
Pressure from nurses to move people while teaching (1)
Training both medical students & residents (1)
Teaching slows down response time (1)
Tutor burnout (1)
Waitlists (1)
Lack of Human Resources (7)
Complaints that residents are not around (1)
Difficulty getting locums (1)
Difficulty getting residents to join practice (1)
Difficulty recruiting teachers / mentors (1)
Practice partner to be able to teach (1)
Some GPs came to PG to avoid teaching (1)
Understaffed with GPs (1)
Lack of Resources (5)
Disagreement about spending / allocating financial resources for health care (1)
Lack of hospital resources to fulfill education (1)
Lack of resources (1)
Lack of resources for technology (1)
Lack of resources for referral services (1)
Infrastructure Challenges (2)
Limited capacity with hospital facilities (1)
Lack of diagnostic facilities (1)
Patient Complaints (2)
Patient complaints about system efficiency (1)
Patients don't understand how system works (1)
Psychological Barriers to Change (2)
Older GPs are resistant to change (1)
Refusal for training in central referral system (1)
Strained Relationships (2)
People are less happy (1)
Relationships with government deteriorated (1)
Lack of Communication / Interaction (1)
GPs are less social (1)
Lack of Trust (1)
Limited trust in foreign GPs (1)

Positive (43)
Stabilization of Human Resources (17)
NMP / training opportunities used in recruitment (4)
Anticipating that medical students will want to stay in the North (2)
Increase in general surgeons (2)
More GPs / specialists (1)
Belief in Dave Snadden (1)
Development of medical staff advisory group (1)
Easier to get locums (1)
Fewer people threatening to walk out (1)
Increase in orthopaedics (1)
Increase in OB / GYN (1)
Increase in pediatrics (1)
Workforce stabilized (1)
Emotional Support / Well-Being (13)
BC Medical Assoc. practice support program (1)
Collegial atmosphere (1)
GPs see a future here (1)
GPs feel valued due to NMP contribution (1)
Enjoy teaching (1)
Keen medical students boost morale (1)
NMP brought sense of pride (1)
NMP created sense of encouragement (1)
Opportunity to give something back (1)
GPs feel heard (1)
People having fun at work (2)
Proud students are doing well academically (1)
Improved Cooperation / Relationships (7)
Emphasis on cooperation & working together (1)
New approach by Northern Health Authority (1)
People accept changes for the NMP (1)
GPs embraced the NMP (1)
GPs feel part of problem solving (1)
Popular to be part of the NMP (1)
Strong sense of ownership of NMP (1)
Financial Support (2)
Government funding to retain GPs (1)
More government funding for primary care (1)
Information Support (2)
NMP sends teaching materials (1)
NMP staff assist with IT / photocopies (1)
Improvements in Infrastructure (1)
Facilities received as a result of NMP (1)
Technology Support (1)
Support for Physician Connect program (1)

Source: The NMP Impact Study 2007.

Table B8a: Sense of cooperation in the pre-NMP period

Positive (23)
Good sense of cooperation (general) (8)
Good cooperation between GPs & specialists (4)
Small, supportive, collegial community (4)
Everyone knew everyone (1)
Friendliness (1)
Good cooperation amongst specialists (1)
Mutual respect (1)
No infighting (1)
Sense everyone is needed (1)
To achieve common goals (1)

Coping with Workloads (6)
Everyone cooperates to solve common problems (2)
Contact colleagues for favours (1)
Contact colleagues to make changes (2)
High attendance / participation at meetings (1)

Obtaining Resources (3)
Cooperation to organize & execute the rally (2)
Cooperation to get resources (1)

Understanding / Flexibility in Roles to Enhance Cooperation (3)
Acceptance / understanding of other's roles (1)
GPs doing specialized work not a concern (1)
Low friction between generalists / specialists (1)

Sharing Information (1)
Contact colleagues for advice (1)

Developing Programs (1)
Cooperation to develop NMP (1)

Negative (8)
Adversarial relationship between GPs & hospital administration (1)
Depends on number of distractions between office & hospital (1)
Disagreements between GPs & Northern Health Authority (1)
Lack of beds (1)
Less opportunity to assist in patient surgeries (1)
Limited sharing of resources within hospital (1)
Other hospitals not keen to receive patients (1)
Strained relations between GPs & BC Medical Association (1)

Source: The NMP Impact Study 2007.

Table B8b: Changes in cooperation

	# of respondents	% of respondents
No change	14	63.6
Improved	5	22.7
Decline	2	9.1
Mixed	1	4.5
N=	22	

Source: The NMP Impact Study 2007.

Table B8c: Types of changes in cooperation

Positive (36)
Improved Cooperation for Teaching / Continuing Medical Education (15)
GPs are teaching / mentoring (3)
Closer cooperation with UNBC (1)
Closer cooperation with Department of OB / GYN (1)
Good CME has continued (1)
NMP created venue for people to work together (1)
NMP sends out teaching materials (1)
NMP support with IT / photocopying for lectures (1)
Push to develop NMP (1)
Special clinical rounds are set up (1)
Students are exposed to public health (1)
Students involved in problem-based learning (1)
Support for teaching (1)
Support from UBC to establish our portion of the NMP (1)
Improved Cooperation for Operations (11)
Good cooperation between specialists & surgeons (5)
Working towards common goals (2)
Improved cooperation – general (1)
More collaborative approach to solving problems (1)
More collaborative approach with hospital administration (1)
Push to increase medical facilities (1)
Improved Availability of Human Resources (3)
More specialists (2)
Influx of new GPs attracted by NMP (1)
On-the-Job Learning (2)
Participating in rounds (1)
Cooperation to Develop Infrastructure (1)
Push to improve medical facilities at the hospital (1)
Improved Sharing of Information (1)
Electronic medical records – sharing of information about patients (4)
Other (3)
Everyone knows everyone (1)
Sense of enthusiasm (1)
Personal contact with surgeons (1)

Negative (15)
Limited Cooperation for Delivering Health Care (6)
GPs find fault with others – everyone does things differently (1)
Fewer offers to assist in your patient's operation (1)
Formal consultations are required (1)
Growth in medical community makes it easier to be anonymous (1)
Less need to cooperate in a larger medical community (1)
Poor interdepartmental cooperation (1)
Communications Problems (2)
Schism with anesthesia needs to be bridged (1)
Takes a long time to contact specialists (1)
Human Resource Challenges (2)
Fatigue of older consultants / specialists (1)
Lack of learners / support staff to provide support (1)
Lack of Awareness (2)
Don't know new staff (1)
Lack of awareness of new staff roles (1)
Lack of Infrastructure (1)
Lack of beds means GPs unable to help (1)
Operational Problems (1)
Lack of OR time (1)
Other (1)
Depends on distractions between the office and hospital (1)

Source: The NMP Impact Study 2007.

Table B9a: Sense of trust in the pre-NMP period

Positive (19)
Colleagues are Dependable (6)
All GPs resigned hospital privileges to encourage change (2)
Can contact colleagues for advice (1)
Can contact colleagues for favours (1)
People have developed a history together (2)
Trust in Capabilities (6)
People's abilities not questioned (5)
Would refer patients to any colleague (1)
Absence of Competition (4)
Little competition amongst GPs leads to trust (2)
Everyone is working towards a common goal (1)
No competition between GPs, there's enough work for everyone (1)

Mutual Respect (2)
GPs respect each other. Work under adverse conditions & know what each other faces (2)
Positive Community Relations (1)
Community trusted GPs to advocate on their behalf (1)

Negative (13)
No trust in government (Ministry of Health) (5)
Distrust with the Northern Interior Health Authority (2)
No trust in BC Medical Association (2)
No trust in hospital administration (2)
Distrust with GPs in other places – feeling isolated & ignored (1)
Varying degrees of trust with medical staff (1)

Source: The NMP Impact Study 2007.

Table B9b: Changes in trust

	# of respondents	% of respondents
No change	16	72.7
Improved	4	18.2
Decline	2	9.1
N=	22	

Source: The NMP Impact Study 2007.

Table B9c: Types of changes in trust

Positive (23)
Improved Relationships (9)
Improved trust in hospital administration (3)
Improved trust in NHA (2)
Administration's trust in medical staff has improved (1)
Greater trust in politicians (1)
Trust in NMP staff (1)
Improved trust in UBC (1)
Enhanced Cooperation (7)
NMP & UNBC have been a rallying point to improve trust (2)
Have developed a history with colleagues (1)
Improved interactions between residents & specialists (1)
Medical Advisory Committee works closely with administration (1)
Trust improved based on common goals (1)
With the NMP, GPs don't feel ignored / isolated (1)

Trust in Capabilities (4)
Appointing key individuals to key roles improves credibility (2)
Trust improved based on problem solving (1)
Trust people teaching are doing a good job (1)
Other (3)
High morale improves trust (1)
Increased trust in public health (1)
Trust that numbers of GPs / specialists will improve (1)

Negative (4)
GPs look down on foreign graduates (1)
Foreign GPs are under surveillance (1)
Less friendly interaction in a teaching hospital (1)
Used to know GPs better (1)

Source: The NMP Impact Study 2007.

Table B10a: Sense of community in the pre-NMP period

Positive (31)

Sense of Cooperation (13)
Plugged into networks through committees (3)
Sense of responsibility to each other (3)
Corridor consultations (2)
Expedited consultation system (1)
Sense of teamwork (2)
Trust / cooperation develops sense of community (1)
Willing to stretch yourself for colleagues (1)

Sense of Common Goals (9)
Community & GPs united (3)
Rally started by GPs / specialists (2)
Everyone has the same problems (1)
Medical community knows they are in an isolated region (1)
No divisions (1)
Support from mayor & city hall (1)

Social Interaction (9)
Everyone knew everybody (2)
Being accepted immediately (1)
GPs inviting other GPs to social activities, i.e. dinner, theatre, etc. (1)
GPs spent mornings in doctors' lounge (1)
Down-to-earth blue collar population (1)
Friendly atmosphere (1)
Informal conversations amongst GPs (1)
Prince George is not too big or small (1)

Negative
Personally disconnected (1)

Source: The NMP Impact Study 2007.

Table B10b: Changes in sense of community

	# of respondents	% of respondents
No change	7	30.4
Decline in sense of community	5	21.7
Increase in sense of community	9	39.1
Mixed	1	4.3
Not sure	1	4.3
N=	23	

Source: The NMP Impact Study 2007.

Table B10c: Types of changes in sense of community

Positive (29)
Interaction & Cooperation (7)
NMP staff consulted physician community before moving forward (2)
Being encouraged to take on other roles (1)
Improved working relationship between NMS, NHA, & NMP (1)
More opportunities for networking (1)
Students act as a bridge between disciplines (1)
Improve hospital facilities for NMP (1)
Positive Relationships (6)
NMP creates a sense of community amongst the teaching unit (2)
Welcoming & supportive community (2)
Everyone gets along (1)
NMP & students are a family (1)
Sense of Ownership of NMP (6)
Sense of ownership of the NMP by the medical community (6)
Stabilization of Human Resources (3)
Exodus of GPs has stabilized (2)
Recruitment of specialties to provide variety of rotation for students (1)
Events (2)
Attending graduation ceremony (1)
Wine & cheese events (1)
Support (2)
In a larger community, GPs don't feel stranded without support (1)
Patients more willing to have student examiners to support NMP (1)

Other (3)
Better morale increases sense of community (1)
Common goals (1)
Improved sense of medical community's position in the province (1)

Negative (19)
Know / recognize fewer individuals (4)
Everyone is busy (3)
Fewer spend time in the doctors' lounge (2)
Less social interaction amongst GPs (2)
Differences between older & younger generation of GPs (1)
Don't know specialists on a personal level (1)
Generation gap (1)
Lack of awareness of individual roles (1)
Difficult to meet colleagues with different schedules (1)
People focus on their niche or small community network (1)
Personality differences (1)
Younger GPs are more focused on family life (1)

Don't know many GPs personally (1)

Don't know many specialists personally (1)

Source: The NMP Impact Study 2007.

Table B11: What do you perceive to be the benefits of the NMP, if any, for your professional practice in Prince George?

Positive (73)
Stimulus to keep Up-to-Date (13)
Enjoy teaching / mentoring (9)
More GPs / specialists (6)
Diversify job roles (5)
Provides incentive to attract / recruit GPs / specialists (5)
Intellectual stimulation (3)
Mutual learning between teachers / students (3)
Retention of northern graduates (3)
Retention of GPs (3)
Long-term decline in workload (2)
Students ask questions from different perspectives (2)
Being able to give back to the medical community (1)
Creates a learning environment (1)
GPs will have more opportunity for time off (1)
Gives sense of well-being (1)
Improved morale (1)
Intergenerational linking (1)
Medical staff are more open to improvements (1)
NMP has helped hospital get money for upgrades (financial lever) (1)
NMP will enable us to be replaced after retirement (1)
Patients are part of training future GPs (1)

Positive Cont'd
Patients learn about medical process through student teaching (1)
People are more academically aware (1)
Relief of orphan patient problem (1)
Students act as a second bridge that might not be there (1)
Teaching gives opportunities to grow in your profession (1)
Teaching improves your c.v. (1)
Transfer of knowledge (1)
Training students to be independent so they are not overwhelmed (1)
You don't lose touch of human /emotional aspects (1)

Negative (7)
Significant time commitment for training medical students (1)
Specialists slowed down by teaching (1)
Increase in workload with student training (1)
Lack of human resources at the hospital to take time off for teaching (1)
Students saturate an area – tough to teach in an area like emergency (1)
Students slow GPs down (1)
Students write many orders for lab tests (1)

No advantage / limited benefits (4)

Source: The NMP Impact Study 2007.

SECTION C: PRESSURE POINTS AND STRESS

Table C1: Stresses that impact professional quality of life

Pressures Associated with Workloads (66)
Heavy patient load (16)
Paper work (12)
Long work hours (9)
Insufficient time to build strong physician-patient relationships (6)
Time constraints (8)
High volume of phone calls (3)
Always multitasking (3)
Waiting room is always full (2)
Almost always running late (1)
Being a new doctor & trying not to miss things (1)
Misdiagnoses, mismanagement (1)
Not able to get a break (1)
Pager use (1)
Pressure to accept new patients (1)
Scheduling (1)

Pressures Associated with Patients (37)
Patient complaints about wait times (13)
Demanding / difficult / rude patients (9)
Patient complaints about continuity of care (3)
Availability of appointments for patients (2)
Patients demanding unnecessary procedures (2)
Patients who self-diagnose using the Internet (2)
Patient addiction to medication (1)
Patients late for appointments (1)
Patients assume they know more (1)
Patients want to be seen quickly (1)
Providing care to orphan patients that you have no prior relationship with (1)
Time available with each patient (1)

Challenges with Organizational Operations (28)
Long wait list for specialists (4)
Maintaining patients who are waiting to see specialists (3)
Arranging patient admission into the hospital (2)
Dealing with patients' social & economic problems (1)
Difficulty accessing non-urgent consults (1)
Difficulty dealing with chronically ill patients (1)
Difficulty getting meals to patients (1)
Difficulty managing geriatrics (1)
GPs are not available as early as specialists (1)
Getting specialized tests – impacts ability to diagnose (1)
Limited access to operating rooms (general) (2)
Limited recognition that some things need to be done quickly (1)
Long wait list at pain clinics in Vancouver (1)
Long wait list for orthopaedics (1)
Long wait list for youth counseling (1)
Long wait times for surgery (1)
Low turnaround for investigations (1)
Mental health keeps changing. Difficult to know how it works (1)
Not sure / must find out where equipment, drugs, etc. are (1)
Patients are now encouraged to decide their treatment (1)
Wait times for patients (1)

Lack of Human Resources (16)
Patient complaints about not being able to find a doctor (11)
Limited availability of specialists (1)
Must constantly recruit people (i.e. nurses, health promotion, etc.) (1)
Lack of anesthetists for the OR (1)
Lack of nurses at the hospital (1)
Lack of support staff (i.e. to calibrate equipment) (1)

Psychological Problems (12)
Trying to shut off the stress (1)
Anticipating the unexpected (1)
Concern / worry about malpractice (4)
Anticipating emergency cases & hoping you have the skills to deal with it (1)
Feeling guilty leaving work (1)
Emotional stress with ill patients (1)
Morale problems (1)
Not being able to do the things you want to for your patients (1)
Staff are also stressed (1)

Technology (6)
Lacking access to / availability of necessary technologies (6)

Lack of Resources (4)
Lack of hospital resources (1)
Lack of funding to close service gaps (1)
Lack of resources to provide timely / adequate care (2)

Financial Problems (5)
Get paid for one problem per patient per day impacts care for complex diseases (2)
Disparity between general & specialist practice (1)
High overhead costs (1)
Treating patients in a cost-effective manner (1)

Lack of Communication / Interaction (3)
Answering machines (1)
Uncertainty over responsibilities for health & support services (1)
Not knowing who to call or how to get the numbers (1)
Limited Support Networks (3)
Facilities unable to offer sufficient support during patient recovery period (1)
Lack of home support services (1)
Lack of support from social work (1)
Pressures Associated with Teaching (3)
Increased pressure to continue providing care while teaching (1)
Feeling stretched with teaching (1)
Working with medical students over the phone to get them to see patients (1)

Problems Associated with Administration / Management (3)
Administration duties impact time available for care (1)
Matching services to needs in the north (1)
Pressure from policy-makers to execute operations not suited for the north (1)
Pressures Associated with Personal Life (2)
Balancing work & family (2)
Pressures Associated with Research (2)
Grant deadlines (1)
Limited advances in pain killers (1)
Limited Infrastructure (1)
Lack of facilities in the hospital (1)
Other (2)
Solicitation from pharmaceutical or other sales representatives (1)
GPs are not well trained to deal with addiction patients (1)

Source: The NMP Impact Study 2007.

Table C2: Professional Pressures / Expectations from Others in the Medical Community

Pressures Associated with Workload (32)
Pressure to accept new patients (12)
Pressure to work longer hours (6)
Pressure to fit patients in with urgent needs (1)
Pressure to provide frequent advice in Prince George (2)
Pressure to see other doctor's patients in the hospital (2)
Can't handle all the referrals (1)
Pressure to deliver when you are on call (1)
Pressure to maintain high standards from colleagues (1)
Pressure to provide continuity of care (1)
Pressure to provide frequent advice to surrounding communities in the north (1)
Pressure to swap shifts at the walk-in clinic / emergency (1)
Shortage of family GPs & specialists creates additional workloads (1)
To avoid making incorrect referrals (1)
To be back up for family practice groups in town (1)

Pressures Associated with Administration (7)
Pressure to participate in committees or other professional organizations (7)

Pressures Associated with Education / Research (7)
Pressure to partake in continued medical education (4)
Pressure to partake in research activities / publish (2)
Pressure to attend conferences (1)

Pressures Associated with Delivery of Health Care / Organizational Operations (4)
Calls from BC Bedline to transfer patients (1)
Emergency is always looking for GPs (1)
More specialists consuming OR time (1)
Pressure to engage in reactive as opposed to preventative care (1)

Infrastructure Problems (3)
Discharging patients early due to limited beds (1)
Limited office space to accommodate students (1)
To avoid admitting patients into the hospital due to lack of available beds (1)

Problems Associated with New Medical Staff (3)
Struggling with how things work (1)
Time needed for new GPs to settle in & become oriented to the routines (1)
Pressure to become familiar quickly with new setting (1)

Pressures Associated with Patients (2)
Pressure to take on family members as patients (1)
Sending patients elsewhere who must bear the cost (1)

Other (4)
Individuals determine their own workload (3)
There are different opinions about how often networks should be used (1)

No pressure (4)

Source: The NMP Impact Study 2007.

Table C3: How is the NMP assisting in alleviating any of these pressures?

Positive (18)
Stabilizing Human Resources (6)
GPs will be replaced / expanded by new grads (3)
Encourages GPs to stay in PG (1)
Influences recruitment (1)
More specialists available to do talks (1)
Expanding Networks (4)
Access to mentors (1)
Facilitated interaction with other colleagues (1)
Networks provide new lens to look at things (1)
Opportunities to meet / interact with students (1)
Developing Capacity (3)
Encourages GPs to keep Up-to-Date (2)
Improvements in CME (1)
Diversifies Work Environment (2)
Engages GPs through committees, research discussions, etc. (1)
Gets GPs out of their office / same routines (1)

Improving Operations (2)
Reducing long-term workload (2)
Providing Support (1)
NMP staff lay things out for you, so disruption is minimized (1)

Negative (6)
NMP doesn't alleviate these pressures (5)
Location choice of student residency will impact pressures (1)

Other (14)
Pressures are not relevant to NMP (14)

Too soon to tell (1)

Source: The NMP Impact Study 2007.

Table C4: Added pressures created by the NMP that impact future practice

Pressures Associated with Workloads (36)
Expands overall workload (5)
Increase in trainees (5)
Time constraints (5)
GPs want a break from teaching (3)
Burnout (2)
Expanded teaching load (residents & medical students) (2)
Overwhelmed by teaching (2)
Snowballing requests (2)
Repeated requests to teach more frequently (2)
Being in multiple places at once (doctor at the hospital, student waiting at the office) (1)
Ensuring medical students & residents receive training according to their level (1)
Feeling guilty for saying no (1)
Must repeat examinations for students (1)
Pressure from external organizations / universities for teaching (1)
Pressure to continue teaching (1)
Reassuring patients during students examinations (1)
Same people are approached (1)

Administration / Management Pressures (12)
Coordinating people with different schedules (1)
Finding substitutes for GPs who teach (1)
Increases administrative duties related to teaching (1)
Lack of energy to organize a preceptorship (1)
Lack of energy to organize an orientation (1)
Not having enough sub-specialties that a teaching hospital should have (1)
Sharing the teaching resource pool – adversely affects resident teaching (1)
Pressures of coordinating around holidays, appointments, different schedules (1)

Organizational Operations (10)
See fewer patients each day (2)
Increases delays / waitlists (1)
Give new GPs / specialists time to settle (1)
Less time spent with patients (1)
Need neurosurgery (1)
Need thoracic surgery (1)
Need to support CNC program to train lab technicians (x-ray, ultrasound, CT scan) (1)
Physician logjam of students in emergency (1)
Students write too many orders for lab tests (1)

Pressures Associated with Human Resources (8)
Lack of teachers to provide appropriate range of clinical experiences (3)
Lack of GPs who teach (4)
Lack of staff to facilitate interaction (1)
Limited GPs available for weekend exams (1)
Need GPs spread throughout northern BC (1)
Pressure to retain medical staff who prefer warmer climates (1)
Teaching in the NMP can also deter recruitment / retention of GPs & specialists in PG (1)

NMP Lacks a Residency Component (6)
NMP needs post-graduate component (4)
Need to recruit residents to specialty areas (2)

Lack of Resources (4)
Coping with an increase in students with the limited hospital resources (1)
Lack of resources to facilitate interaction (1)
NMP using resources that could be allocated to graduating resident specialists (2)

Infrastructure Problems (3)
Need more space (1)
Need formal trauma centre in PG (1)
Worrying about not having the beds / cases on which to teach (1)

Financial Problems (2)
Financial loss of teaching / mentoring students (2)

Developing Quality of Programs (1)
Uncertainty over standards for teaching / mentoring (1)

None (6)

Source: The NMP Impact Study 2007.

SECTION D: INVOLVEMENT IN THE NMP

Table D1: Are you involved with the NMP in any way?

	# of respondents	% of respondents
Yes	21	84.0
No	4	16.0
N=	25	

Source: The NMP Impact Study 2007.

Table D2: Type of Involvement with the NMP

Research, Teaching, & Mentoring (45)
Teaching medical students in the office (11)
Teaching at the hospital (8)
Lectures (4)
Discipline specific instruction (7)
Mentoring (3)
Teaching (general) (2)
Adjunct professor role (1)
Discuss lifestyle issues with students (1)
Executing exams (1)
Prescription seminars (1)
Problem-based learning sessions (1)
Research meetings (1)
Supervise medical elective clerkships (1)
Teaching students in OR / anesthesia (1)
Tutorial work with students (1)

Management, Administration, & Development (8)
Recruiting for NMP (2)
Coordinating programs (1)
Ensuring teacher evaluations are executed properly (1)
Liaison role (1)
Organizing courses (1)
Politically involved with the NMP – getting it going (1)
Committees related to medical students (1)

Source: The NMP Impact Study 2007.

Table D3: Potential Interests for Involvement

May become involved in the future (3)
Interested in lecturing / teaching (1)
May become involved after next leave (1)
May become more involved if able to obtain a practice partner (1)

Source: The NMP Impact Study 2007.

Table D4: Reasons for No Involvement

Time issues (1)
Uncertainty about what being a mentor entails (1)

Source: The NMP Impact Study 2007.

Table D5: Reasons for Involvement with the NMP

Interest in Teaching / Student Development (12)
Wanted to teach (3)
Enjoy having students around (2)
Already set up for training (extra computer in the office) (1)
Medical specialty was an essential part of medical education (1)
Obligated to teach medical students if already teaching residents (1)
Stimulating to work with young students (1)
Talking to students & influence them (1)
Teaching is part of being a doctor (1)
Want to pass the torch (1)

General Recruitment (7)
Someone asked / recruited them (7)

To Support Community Driven Initiative (6)
The community wanted this (2)
To help the NMP succeed (1)
Everyone was jumping on the bandwagon (1)
Rally brought GPs / community together (1)
To share enthusiasm for the North (1)

Personal Reasons (5)
To give back to the medical community (2)
If you complain about it, put your money where your mouth is (1)
Because I care (1)
Guilt (1)

Interest in Management & Administration (2)
Interest in medical politics (1)
Involvement continued after original discussions with the government (1)

To Address Issues in Health Care Delivery (1)
NMP was answer to the problem of medical manpower (1)

Source: The NMP Impact Study 2007.

Table D6: Positive Aspects for Involvement with the NMP

Teaching & Development (31)
Forces you to maintain your knowledge (8)
Enjoy teaching (4)
Enjoy having medical students train up here (2)
Mutual learning between students / teachers (3)
Students ask questions from different angles (3)
Having a connection with students involved in patients' care (2)
Intellectually stimulating (2)
Interesting to see students at different levels (2)
Being around enthusiastic students (2)
Convincing students to pursue your specialty (1)
Ensures you stay focused while working with fewer resources (1)
Program could not run without specialist involvement (1)

Personal Satisfaction (7)
It's fun (4)
Feels good to give back to the community (1)
Free meals each year (1)
To rediscover why you chose medicine (1)

Developing Networks & Partnerships (4)
Adds socializing aspect (1)
Connecting with NMP staff (1)
Interacting with other lecturers (1)
Talking to your colleagues (1)

Developing Health Care Capacity in the North (3)
Enjoy watching northern BC catch up with modern health care (1)
Positioning ourselves to have adequate resources to care for the North (1)
To watch programs attain critical mass (1)

Job Satisfaction (3)
Diversifies work experiences (1)
More relaxing than regular duties (1)
Makes work enjoyable (1)

Obtaining Additional Sources of Support (2)
Patients appreciate the extra attention (1)
Students can save you time (interview the next patient) (1)

Source: The NMP Impact Study 2007.

Table D7: Negative Aspects for Involvement with the NMP

Operational Constraints (26)
Time pressures (4)
Students slow GPs down (3)
Expands workload (2)
Fewer patients can be seen (1)
Results in longer wait lists for specialists (2)
Change at the university takes time (1)
Difficult having a resident & medical student in the office at the same time (1)
GPs are already stretched (1)
Filling in for physicians who are held up in OR (1)
Filling in for GPs who are late (1)
Filling in for GPs who do not show up for teaching (1)
Filling in for GPs who get called away (1)
Impacts ability to take holidays / leave on short notice when you have students (1)
Lack of time for curriculum development (1)
More e-mailing (people at university prefer to email) (1)
Overwhelmed with academic things that do not involve them (1)
Preparing exams (1)
Stressful to deal with students not doing a good job (1)
Too many meetings (1)

Financial Constraints (3)
Financial loss (seeing fewer patients) (1)
Not compensated for lecture preparation time (1)
University has not contributed any funding for hospital upgrades for the NMP. Hospital budget allocated to expanding teaching space (1)

Human Resource Limitations (2)
Feel obligated to say yes with few involved (1)
Stress of finding volunteer patients (1)

Infrastructure Problems (1)
Takes up office space (1)

Political Constraints (1)
Northern BC has no power. Struggle to get results up here (1)

Other (8)
No negative aspects (6)
Some patients do not want to be seen by students (1)
UNBC is excluded from research cluster (1)

Source: The NMP Impact Study 2007.

Table D8: Were any of these issues unanticipated?

Anticipated (14)
Issues were anticipated (10)
Communicate with other specialists to see if its slowing them down (1)
Had faculty meetings about anticipated problems before NMP started (1)
Used to having residents / trainees (1)
Vancouver has a tougher time finding GPs to teach (1)

Not Anticipated (4)
Didn't appreciated impact of being involved (1)
Didn't anticipate to be teaching / executing seminars (1)
E-mails have dwindled somewhat (1)
Stopped going to many meetings (1)

Source: The NMP Impact Study 2007.