



**Nursing Practice in
Sexually Transmitted
Infections and HIV in
British Columbia**

Report of Survey Findings

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Investigative Team

Vicky Bungay, Assistant Professor, School of Nursing, University of British Columbia

Mark Gilbert, Physician Epidemiologist, Division of STI and HIV Prevention and Control, BC Centre for Disease Control

Sunny Mak, Senior Medical Geographer, Epidemiology Services, BC Centre for Disease Control

Daphne Spencer, Nurse Educator, Division of STI and HIV Prevention and Control, BC Centre for Disease Control

Melanie Rivers, Program Manager, Chee Mamuk, Division of STI and HIV Prevention and Control, BC Centre for Disease Control

Michael Rekart, Division of STI and HIV Prevention and Control, BC Centre for Disease Control

Lead Investigator and Corresponding Author

Vicky Bungay, PhD RN

Assistant Professor, School of Nursing, University of British Columbia

T201-2211 Wesbrook Mall

Vancouver BC, V6T 2B5

Phone: (604) 822 7933

E-mail: vicky.bungay@nursing.ubc.ca

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Copies of this report are available on request or can be downloaded at:

<http://www.nursing.ubc.ca/pdfs/EnvironmentalScan1102.pdf>

Executive Summary

During 2009-2010 investigators from the BC Centre for Disease Control (BCCDC) and the School of Nursing at the University of British Columbia, in collaboration with regional health authorities, First Nations communities and private service organizations undertook a project aimed at understanding the nature and scope of public health nursing practice in the area of sexually transmitted infection including HIV prevention and control. The final data set included responses from 314 public health nurses.

Data sources consisted primarily of census data from the College of Registered Nurses and a self-administered 62-item questionnaire. A total of 576 public health nurses working in STI including HIV prevention and control were identified through analysis of employing agencies identified within the CRNBC census data. The questionnaire was designed to assess the demographic characteristics of public health nurses, the client populations served, workload distribution, clinical practice activities, nursing practice resources, and continuing education needs.

The majority of nurses were baccalaureate-prepared women with an average age of 44. The nurses, had been practicing for an average of 18 years, nine of which were in STI and HIV prevention and control. Approximately half of the nurses worked on a full-time basis. Community/public health centres in urban settings were the most common site of employment. On average, nurses spent 28% of their work in the area of STI and HIV care. Women were reported as recipients of nursing care more frequently than any other client population.

The majority of nurses (76%) provided care in both STI and HIV prevention and control and spent at least half of their time in direct client care activities. Approximately 78% of nurses undertook STI and HIV testing. Seventy-four percent of the nurses provide clients with medication as part of STI treatment and oral antibiotics were the most commonly administered and dispensed medications. Emergency contraceptives and oral contraceptives were also administered by over 70% of the nurses.

Referrals to other health service providers was common practice with physicians, abortion services, mental health care, and community organizations identified as the most common sources of referrals. Nurses were active in the reporting process for reportable infections and regularly engaged in health education activities primarily at the level of individual clients, although community-based education practice was reported by half the participants.

Public health nurses were predominantly satisfied with many elements of their work, particularly in relation to direct client care interactions. Nurses were less satisfied with the amount of administrative support they obtained in their work setting, the physical space in which they worked, and their limited opportunities for continuing education and professional development activities.

This project represents a detailed analysis of nursing practice in STI prevention and control in British Columbia and will provide an essential baseline for future investigations pertaining to the outcomes associated with legislated changes in nursing practice in the field of STI prevention and control.

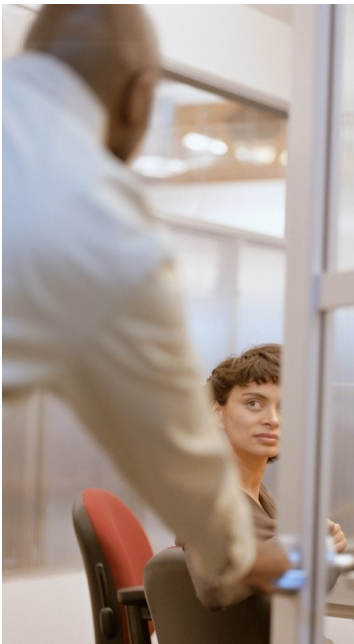
Table of Contents

1. INTRODUCTION.....	1
2. STUDY AIMS AND OBJECTIVES	2
3. METHODS	2
3.1. PHASES.....	3
3.2. RECRUITMENT AND SAMPLING.....	4
3.3. ANALYSIS.....	6
4. RESULTS.....	6
4.1. CLIENT CHARACTERISTICS AND NURSING PRACTICE.....	7
4.2. SCOPE OF STI AND HIV PRACTICE.....	8
Assessment.....	8
Treatment.....	8
(A) Providing Clients with Test Results	
(B) Medication Administration and Dispensing	
(C) Referrals	
(D) HIV Post-Test Counselling	
Reporting.....	10
Other Health Education.....	10
4.3. JOB SATISFACTION AND PROFESSIONAL DEVELOPMENT.....	10
5. SUMMARY.....	11
6. BIBLIOGRAPHY	13
7. TABLES	15

1. INTRODUCTION

Sexually transmitted infections (STI) including HIV pose considerable health problems for British Columbians, particularly among people who experience social and economic marginalization. In 2009, Aboriginal people accounted for 16.6% of all new HIV infections in BC, Aboriginal women accounted for 23.9% of all new positive HIV cases and 28.6% of syphilis cases among women. Men who have sex with men (MSM) accounted for the highest percentage of new syphilis infections and comprised 45.6% of all new positive HIV tests in 2009. The ramifications of STI are extensive, including reproductive health problems, cancer, AIDS, and an increased burden on our health care system.

Public health nurses (PHN) are an essential component of public health programs and services in STI prevention and control¹. PHN provide counselling, testing, referral, reporting, partner notification, treatment, advocacy, and educational services at the individual, community and systems levels of health care. PHN work in diverse settings such as clinics, health centres, outposts, schools, cyber-outreach, and on the streets. To date, numerous studies have been undertaken to evaluate the parameters of STI nursing practice in relation to specific client populations (e.g., street-involved) or in the context of particular practice settings (outreach, rural, urban). Although each of these studies are illuminating and have wider implications for nurses practicing in alternate settings, the majority have been exploratory. A comprehensive understanding of the realities of nursing practice (e.g., competing job activities, resources for care), the distribution of nursing services, continuing education needs, and the guidelines necessary for practice was warranted.



Additionally, changes within the Health Professions Act require that as of March 31, 2010, all nurses working independently in STI prevention and treatment be certified through a CRNBC recognized educational program. Prior to this project, there was limited data concerning current nursing practice activities. Baseline data is critical to inform evaluation of the outcomes for certified practice.

During 2009-2010 investigators and practitioners from the University British Columbia School of Nursing and the BCCDC undertook an environmental scan to document the distribution of public health nursing resources in STI prevention and control, the nature and scope of nursing practice activities and client populations served, and to assess the distribution of nursing resources in relation to case data for reportable STI including HIV. Prior to the study inception, members of the investigative team were working closely with the CRNBC to translate legislative changes into resources necessary for the implementation of certified practice. We were also in dialogue with nurse leaders in STI care throughout the province in relation to changing

¹ For the purpose of this project sexually transmitted infection (STI) including HIV prevention and control was defined as those practices, policies, and procedures aimed at eradicating, eliminating or minimizing the impact of STI including reducing the incidence and duration of disease, the risk of infection and transmission, and the burden of STI to society. STI prevention and control assumes the principles of a population health approach in that prevention may occur at any point before an STI occurs, before signs and symptoms appear, and even after a the health issue has occurred (e.g., primary, secondary and tertiary prevention) (Minnesota Department of Health, 2001). Of particular interest were those STI prevention and control nursing activities, policies and procedures associated with health education, counselling, partner notification, reporting, testing, treatment, and advocacy at the individual, community, and systems levels of health care.

education requirements for nurses to receive certification for practice. There was a growing awareness that diversity with regards to nursing practice existed throughout and within the service delivery areas, yet there was limited understanding of the full scope of practice, particularly in relation to the legislative changes within this scope of practice. In this report we provide an overview of the outcomes from two aspects of this project: the distribution of nursing resources; and the scope of nursing practice activities. The surveillance aspect of the project is still under analysis.

2. STUDY AIMS and OBJECTIVES

The primary aim of the study was to develop a more comprehensive understanding of the ways in which PHN are currently engaged in STI and HIV prevention and control practice, where they provide this care, and the geographical distribution of PHN services.

The specific objectives were to:

- Develop a clear understanding of the scope of practice among PHN working in STI prevention and control in diverse geographical settings, including the kinds of services delivered, client populations served, and the amount of time allocated to service provision;
- Develop a geographical representation of public health nursing service delivery in the area of STI prevention and control in British Columbia;
- Assess the relationship between the distribution of public health nursing services and epidemiological data that specifies the incidence of STI and HIV testing in British Columbia;
- Identify key educational and service support (e.g., harm reduction programming) needs;
- Provide information that may support educational and service support programming in the area of STI prevention and control; and
- Provide the base-line empirical data for future longitudinal research to assess the impact of changes in legislated certified nursing practice.

3. METHODS

We used a modified environmental scan approach in order to meet the project aims. Environmental scan approaches have been used successfully in similar projects to assess educational and research strengths and needs of health service providers in Canada and the US. Environmental scan research incorporates methods and resources that enabled the investigative team to respond to the need to assess existing PHN distribution data and the current scope of nursing practice activities within the province of British Columbia. Because the ultimate aim of an environmental scan approach is to facilitate the identification of strengths and areas for development within a specific area of practice, the outcomes of the project may be utilized for further analysis pertaining to the interrelationships

between nursing practice and STI prevention and control.

The research protocol was reviewed with the Provincial Prevention Directors' Council and nurse leaders within each regional health authority. Ethical approval for the project was obtained from the Behavioural Research Ethics Board at the University of British Columbia and each of the health authorities' respective ethical review committees.

3.1 PHASES

The project occurred in three distinct phases.

Phase One included the collection and analysis of several sources of data that could be used to calculate the public health nursing resources and related distribution of these resources within British Columbia. The data included:

Census data from the College of Registered Nurses for nurses who were registered for active practice March 2008 - February 2009. Specific items drawn from the CRNBC registration renewal application included: (i) primary employer name and postal code; (ii) current status with employer; (iii) place of work (mental health centre, community health agency, public health unit, nursing station or outpost); (iv) primary area of responsibility (psychiatric/mental health, community health, public health); and (v) position (staff nurse/home care/community nurse, manager/assistant manager/supervisor, nurse practitioner).

Enrolment data for BCCDC STI and HIV Prevention and Control Division continuing education courses for January 1, 2008 – March 31, 2009.

Specific items included:

- Number of total enrolees
- Health Service Delivery Area for each enrolee
- Enrolee employing agency
- Enrolee courses completed.

No personal identifying information (e.g., name, address, registration number) was obtained in collecting data in phase one activities.

Phase Two involved the development and distribution of a 62-item questionnaire that measured specific details concerned with the scope, nature and geographical distribution of PHN practice. Questionnaire items were developed by a team of research, education and practice experts who drew from best practice guidelines and recommendations within the Canadian Guidelines on Sexually Transmitted Infections, the PHN pre-determined treatment schedule published through the BCCDC, certified practice core competencies, drafts of decision support tools, nursing theory, and practitioner input. The instrument was pilot tested with nurses throughout BC and revised to ensure accuracy and clarity of items.

Specific categories of measurement included:

- Demographic characteristics
- Geographical location of work
- Client populations served
- PHN workload distribution
- PHN clinical practice activities in STI and HIV prevention and control
- PHN educational preparation
- Policies and resources used in planning and delivery of nursing care
- PHN self-identified continuing education and support service needs.

Phase Three is currently in progress and involves the analysis and mapping of PHN resources and appropriate case and testing data for reportable STI and HIV.

3.2 RECRUITMENT AND SAMPLING

The goal of the study was to recruit all PHN working in STI and HIV prevention and control in the province of British Columbia. Regionally, the sample was intended to encapsulate nurses within all health authorities, private organizations, federal and provincial corrections facilities, and First Nations communities. Inclusion criteria were that the participant was a PHN licensed for practice in British Columbia who provided one or more of the following services specific to STI and HIV prevention and control within a public health context:

- Assessment
- Testing
- Treatment
- Counselling (pre and post-test)
- Reporting
- Partner notification/follow up
- Harm reduction
- Community education and capacity building.

There were several distinct steps in undertaking recruitment. First, the entire CRNBC data set was analysed to determine a comprehensive list of employing agencies for public health and community health nurses. This list was cross-referenced with the BCCDC education data to create an initial list of all agencies known to employ PHN practicing in STI and HIV prevention and control. The remainder of employing agencies noted in the CRNBC data were then contacted by phone to determine whether or not nurses engaged in STI and HIV practice. The finalized list contained 231 agencies/sites, all of whom were contacted to determine the number of nurses employed, which provided the estimate for the overall sample size of PHN in BC working in STI and HIV prevention and control.

The next step was to determine the appropriate recruitment strategies within each health authority that would be the least disruptive to the work setting and support confidentiality and anonymity of participants. A meeting was held with the Provincial Prevention Director's Council to share the aims of the study and to identify appropriate contact people within each health authority. Building on existing working relationships we were able to have multiple contact people within each health authority who assisted in the general recruitment process. In most health authorities, managers of programs and services distributed the project summary and invitation to participate at staff meetings or via e-mail communications and also ensured that questionnaires were distributed among the staff nurses. In some instances, members of the investigative team were invited to team meetings to explain the study and invite people to participate. Questionnaire packages were distributed to the nurse manager who then distributed them on our behalf. Similar processes were used for recruiting within private organizations. Each questionnaire package contained a detailed description of the study, contact information for the principal investigator, and other related ethical material. The package also contained one copy of the survey with an assigned code and a stamped pre-addressed envelope for the participant to be able to return the questionnaire directly to the study site. No identifying information other than age and employer were recorded on the questionnaire. Return of the completed survey was considered consent for participation.

Participants were also provided with an entry form, for one of ten draws for a fifty dollar (CAN) Chapter's gift certificate, which was returned with their questionnaire. Only a contact number and first name were required.

Although our initial intent was to recruit nurses from correctional facilities and First Nations communities we were unable to meet these goals due to time and fiscal restraints within the project, the restructuring of First Nations health programming, and the significant health challenges (e.g., H1N1) that arose in the course of this study that rendered recruitment inappropriate in the face of the demands on PHN workload. It was also recommended to us in consultation with some of the First Nations health councils with whom we had contact that the nature of practice within the communities varies quite differently than public health nurses working within the health authorities and as a result, a study concerned specifically with nurses working within First Nations communities may be more appropriate. We took this under advisement and are exploring further investigative options within First Nations communities that may better address the needs as identified within the communities.

3.3 ANALYSIS

The CRNBC data set that was obtained contained 24,079 individual entries that represented each registered nurse (case) who met the inclusion criteria for the data extraction from the CRNBC database of registrants. Cases that cited acute care, senior care facilities, and home care services as primary employers were deleted based on our understanding of the scope and location of PHN STI and HIV prevention and control practice in British Columbia. Phone calls were also made to a selection of acute, senior, and home care facilities to confirm that these cases did not meet overall inclusion criteria in context of STI and HIV care. Cases who did not identify a primary employer were also deleted. Of those remaining, each primary employer was contacted to determine if their agency provided nursing care in relation to the inclusion criteria (see Hetherington, 2009 for a comprehensive discussion of CRNBC data set construction and analysis).

All questionnaire data was entered into an SPSS® database and checked for accuracy. Analysis of the questionnaire data is ongoing. For the purpose of this report descriptive statistics that summarize the nurses' responses to the data categories explored was the primary mode of analysis.



4. RESULTS

Drawing upon our analysis of the CRNBC recruitment data, the BCCDC education data, and our follow up with employers, we determined that there were 581 PHN employed by a health authority or private organization that met inclusion criteria for the project. An additional 100 nurses were identified by consulting with health councils within several First Nations communities. We distributed questionnaires to 681 nurses based upon the number of nurses identified within each agency that reported to have PHN practicing within the inclusion criteria. Three hundred and twenty-one participants returned questionnaires, 314 of whom met the inclusion criteria. Our overall response rate was 47%, with a range of 39% - 70% distributed among the health authorities. Of the 100 surveys distributed within First Nations communities, 25 surveys were returned completed and another 8 were returned with a note highlighting that the nursing scope of practice did not address STI and HIV. Most participants were women prepared at the baccalaureate level who had, on average, over 18 years of experience as a nurse, nine of which were in STI and HIV prevention and control. Of the 27 participants prepared at the master's level 11 were Nurse Practitioners. We did not assess if they were working as nurse practitioners in their current work in STI and HIV

prevention and control. The most common type of work setting was clinic/public health or community health agency (n=266; 85%) with the majority of nurses (63.4%) working in urban settings (see Table 1, in section 7, for a detailed demographic profile of the participants).

4.1 CLIENT CHARACTERISTICS AND NURSING PRACTICE

We examined several client-related aspects of nursing care to assess the allocation of PHN work in STI and HIV care, the client populations served, and the means by which clients access nursing services (see Table 2 and Table 3). PHN reported that an average of 28% of their regular work hours were in the field of STI and HIV care and direct client care and documentation accounted for approximately 50% and 14% of their STI and HIV work activities respectively. Over half of the participants with five or more years of STI and HIV experience reported an increase in the amount of time they spent in STI and HIV care. Women who have sex with men and youth were the most frequently cited recipients of nursing care, while men who have sex with men and Aboriginal people were noted to receive care less often (Table 3). Clients most frequently access PHN care through self-referral and referral through community resources including other health care agencies, drop-in centres, school nurses and teachers, and non-profit agencies (Table 2).



4.2 SCOPE OF STI AND HIV PRACTICE

The scope of STI and HIV public health nursing practice is complex and involves many aspects of care. Table 4 summarizes general aspects of PHN scope of practice. As noted, the majority of nurses provided both STI and HIV services to clients. Over 20% of participants did not provide STI or HIV testing and the majority of time spent in direct client care was concerned with assessment activities including sexual health history taking and physical examination. To further document the details of results concerning practice activities, we divided the findings according to the headings:

- Assessment
- Treatment
- Reporting
- Findings related to the practice activities of health education, pre- and post-test counselling and referrals are further discussed within these headings.

Assessment

The PHN participants were asked to provide detailed accounts of the frequency with which they carried out specific assessment practices when conducting a comprehensive physical assessment with clients. Sexual health history taking, physical examination practices, and testing procedures were also included. The results are detailed in Table 5.

PHN participants who carried out STI (79%) and HIV (78%) testing were further surveyed about professional practice activities pertaining to the testing interaction with clients. The items assessed represented ethical and professional practice topics pertaining to informed consent, reporting, confidentiality, assessment of clients' support networks, and specific aspects of prevention and control (e.g., transmission prevention, partner notification, and harm reduction). Participants' self-reports of frequency of regularly engaging with clients in relation to these topics are summarized in Table 6. While the majority of PHN reported always engaging in many aspects of ethical practice and health promotion and illness prevention activities, discussions with clients about their personal supports, coping, and health issues were noted to more generally occur less frequently.

Treatment

Treatment is a critical aspect of STI and HIV prevention and control. Drawing from the core STI nursing practice competencies approved by the CRNBC, we specifically assessed the following PHN treatment practices:

- Providing clients with test results
- Medication administration and dispensing
- Client referrals to other health services
- HIV post-test counselling.

(A) Providing Clients with Test Results

When asked on a scale of one (never) to five (always) the frequency of reporting test results by phone or in person, 64.9% of PHN reported a range of sometimes to always for phone results and 90.4% reported sometimes to always in-person. Of the 73 PHN who noted other means of notification, 56 (78%) cited e-mail as the mode of reporting results to clients.

We also assessed PHN practice when explaining test results to clients during follow up interactions. Greater than half of the 314 nurses responded “often” or “always” when asked about the frequency of discussing the importance of follow up visits (81.9%); window periods (76.1%); the differences between positive, negative, and indeterminate results (53.5%); and confirmatory testing (51.9%) and with clients. Tests of cure were reported least frequently as a topic discussed when explaining test results with 37.3% of PHN reporting “often” or “always”.

(B) Medication Administration and Dispensing

Participants were provided with definitions for medication administration and dispensing based on the CRNBC Practice Standards. Medication administration is defined as giving medications to another individual orally or by any other route. Medication dispensing means that the nurse prepares a drug and includes the selection, preparation and transfer of a limited number of doses of a drug to a client.

Approximately 14% (n=43) of PHN noted that treatment for STI was not part of their everyday practice. Of the 270 PHN who reported providing STI treatment, 264 (84.3%) and 230 (74.0%) reported administering and dispensing medications respectively. 42.9% (n=134) PHN reported that they “sometimes” provided treatment for STI in the absence of confirmed laboratory testing while only 11.2% (n=35) reported “often” and 32.4% (n=101) reported “never” or “rarely”. Table 7 details the results of PHN STI medication administration and dispensing with the scores representing all PHN who reported the frequency of administering or dispensing medications within the range of ‘sometimes’ to ‘always’. It is important to note that this data includes only those nurses who reported providing medication treatment for STI. It is feasible that PHN who did not provide STI treatment may administer and/or dispense oral contraceptives or immunizations. The full scope of PHN practice within the context of contraceptive management as one aspect of Reproductive Certified Nursing Practice is the focus of a separate investigation.

At the time of project design, significant discussions were underway with health care providers, nursing leaders, and the CRNBC in relation to certified practice and decision support tools for RN treatment of urinary tract infections (UTI) in the absence of confirmatory laboratory tests. There was no empirical data concerning the current PHN practices for this issue. 199 (65.9%) and 46 (15.2%) of 289 PHN who responded to this question reported “never” and “rarely” administering antibiotics based solely on physical assessment findings; 39 (12.9%) reported “sometimes” and 11 (3.6%) reported “often” or “always”. 72.2% (n=210) of 291 participants reported “never” and only 15 PHN (5.1%) reported “often” or “always” dispensing antibiotics for the treatment of non-confirmed UTI.

(C) Referrals

The important role of PHN in supporting clients’ access to other health and social services was evident. Physician general practitioners, abortion services, and mental health care were most frequently cited as the types of referrals made. The breadth of referrals made by PHN in STI and HIV care is detailed in Table 8.

(D) HIV Post-Test Counselling

Post-test counselling is a critical aspect of HIV prevention and control nursing practice. Among the 265 PHN who reported that they conducted HIV post-test counselling, we further assessed the frequency with which they carried out key areas of post-test counselling practice; the results of which

are summarized in Table 9.

Reporting

Reporting infections is an important element of STI and HIV prevention and control. PHN were asked to document the frequency with which they carried out specific reporting activities for STI and HIV. Four PHN responded that reporting was not part of their job activities and the results for the remaining PHN who responded to these questions are outlined in Table 10.

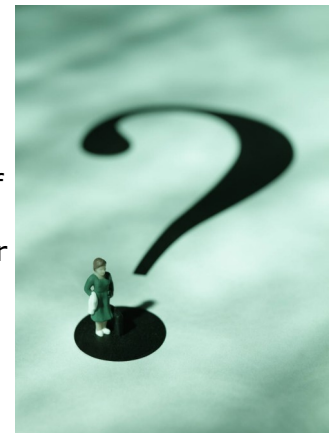
Other Health Education

Health education is foundational to health promotion and infection prevention within public health nursing practice. The majority of health education activities occurred with clients on a one-on-one basis (97.1%). Health education with small groups (2-6 people) was conducted by approximately half (48.6%) of participants, while larger group (≥ 7 clients) education was undertaken by slightly less PHN (40.6%). In addition to assessing the topics discussed with clients within the realm of testing and counselling (see Table 6 and Table 9), we appraised whether or not PHN provided educational resources to clients and the diversity of topics that these resources addressed. 237(75.5%) of nurses reported providing educational resources (e.g., written materials, website information) to clients. The topics addressed in these educational resources are summarized in Table 11.

At the community level, approximately half of the participants reported providing educational programs within school settings (50%) and in communities (49.7%) in general. PHN were also active in public awareness educational initiatives within their work settings with the majority reporting the use of patient education materials (96.2%) and posters (85.7%) as the primary means of raising public awareness of STI and HIV/AIDS.

4.3 JOB SATISFACTION AND PROFESSIONAL DEVELOPMENT

PHN were asked to rate their level of satisfaction concerning select aspects of their work environment including the time allotted for specific patient care activities, the physical space in which they worked, and the supports and resources available to support their practice. As evidenced in Table 12, over 80% of PHN participants were satisfied with time allotment for nursing work, while fewer nurses were satisfied with their physical location and the amount of administrative support they obtained in their work setting. PHN responses to open-ended questions regarding the most positive and negative aspects of their work further illustrated that client interactions were considered the most positive aspect of their work. Inconsistent policies, limited physical space, and limited opportunities for professional development through continuing education were cited most frequently as the negative aspects of work.



Within the context of continuing education, 60 (19.1%) and 180 (57.3%) PHN reported that they attended either zero or one to three professional development activities in the past year. Fifty-five

(18%) of PHN reported feeling educationally unprepared for their work and 72 (23.5%) reported that they were “unprepared” for the level of independence required to provide STI and HIV care. More than half of participants (59%) expressed that they were supported to engage in community advocacy projects in their current work setting, and one third (32.5%) reported being unable to address prevention at primary, secondary, and tertiary levels.

PHN responded positively to the need for continuing education in a diversity of topics with 85-90% of PHN responding affirmatively to the need for continuing education in human sexuality and sexual practices; mental health care, street drugs and addictions, and diagnostics. PHN also responded affirmatively (greater than 90%) to the continuing need for the following workshops offered in collaboration with BCCDC:

- Hepatitis Care Update
- STI Care Update
- Partner Counselling and Referral Services.

PHN used a wide variety of resources in their practice that included practice guidelines, web-based resources, and other health care professionals. A paper-based versus online version of the Canadian Guidelines on Sexually Transmitted Infections was the resource used by most PHN (88.9%). Health authority and clinical site specific policies were reported to be used by less than half of the PHN (41.6% and 33.4% respectively), the Immunization Manual available via the BCCDC was the resource reported second highest, by 86.6% of participants, and 228 PHN (95.4%) reported that the BCCDC PHN Predetermined Treatment Schedule was user-friendly, while 58(19.5%) of participants reported not having an awareness of these guidelines. The BCCDC website <http://www.bccdc.ca> was the web resource most frequently used (86.4%) while STIresource.com was used by 38.3% of participants. Physicians (80%), other nurses (73.9%), and communicable disease nurse leaders (56.8%) were the people resources most commonly cited as sources of practice support.

5.0 SUMMARY

This project represents the largest database detailing the nature and scope of public health nursing practice in STI prevention and control in the province of British Columbia. We have provided a detailed description of the nature of nursing practice activities within the realm of assessment, treatment, health education, reporting, and counselling. As evidenced within the findings, not all PHN were working to the full scope of their practice, particularly in the field of STI and HIV testing and treatment. Although it was beyond the scope of this study to examine the rationale underpinning why almost one quarter of PHN were not providing testing services and fifteen percent did not administer medications as part of their treatment, it is worthwhile to consider strategies to maximize nursing care delivery. Further investigation is also warranted to better understand why less than half of PHN consistently conduct a sexual health history as part of their assessment and even fewer interpret laboratory results or conduct pap tests. In addition, we must consider why women are the primary clients receiving nursing care in light of the surveillance data that illustrates that STI and HIV are disproportionately experienced by MSM and Aboriginal people, especially women.

Given the ever-increasing shortages within the nursing workforce in BC, issues of retention, and the

ever-changing knowledge regarding the client populations and related health issues, we must also consider the limited opportunities that PHN have for continuing education. Although many of the current courses available to PHN in STI prevention and control were reported to be critical, it may be worthwhile to explore what other education is warranted and how best to deliver this education to PHN. This will require a comprehensive understanding to the barriers to continuing education that far exceed the scope of this report. Public health nurses working in STI prevention and control represent a small number of registered nurses who are practicing in BC (total RN practicing in 2009 without conditions was 35,448). Despite their small numbers, PHN are a critical resource within our public health care system. In addition to assessing, treating, counselling, and providing health education PHN are an essential source of referral to other health services, particularly family physicians.

The information included within this report is invaluable to further investigations concerned with assessment and evaluation of the outcomes of changes in legislation in the scope of nursing practice and certification in reproductive health care.

Our findings are also useful for future studies that may critically examine the current practice of public health nurses in relation to best-practice guidelines as recommended in certified and non-certified practice decision support tools and the *Canadian Guidelines on Sexually Transmitted Infections*.

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7. Tables

Table 1. Demographic Characteristics

Characteristic	n	%
Gender	313	
Male	20	6.4
Female	293	93.6
Age		
Mean (SD)	44 (10.4)	
Range	23-67	
Years in Nursing		
Mean (SD)	18.4 (11.2)	
Years in STI and HIV		
Mean (SD)	9.0 (7.9)	
Work Status	312	
Full Time	171	54.8
Part Time	112	35.9
Casual	29	9.3
Educational Preparation	311	
RN Diploma	41	13.2
BSN	241	77.5
RPN Diploma	2	0.6
MN/MSN	27	8.7
Completed Continuing Education	276	
BCCDC STI Program (Pre-2006)	127	46
BCCDC STI Online Program	72	26.1
CNA Community Health Certification	4	1.4
HIV Pre/Post Test Counselling	215	77.9
Partner Counselling Referral Services	82	29.7
UBC HIV/AIDS Nursing Course (N443)	9	3.3
BC Women's Reproductive Screening Course	83	30.1
Geographical Work Setting		
Urban	199	64
Rural	84	27
Remote	28	9

Table 2. Client Descriptions

Characteristic	n	%
Number of PHN in Work Setting	306	
Mean (SD)	12 (15.1)	
Range	1-100	
Number of PHN in STI and HIV care in Work Setting	309	
Mean (SD)	7 (8.2)	
Range	1-50	
Percentage of Total Work in STI and HIV Care		
Mean (SD)	28 (30.7)	
Range	1-100	
Total Number of Clients/Week	310	
1-10	85	27.4
11-30	98	31.6
>31	127	41
Total Number of STI and HIV Clients/Week	306	
1-10	217	70.9
11-30	59	18.8
>31	30	2.3
Clients Routes of Access to PHN Care	311	
Self Referral	296	95.2
Community Referral	214	68.2
Physician or NP Referral	190	61.1
Other	28	9.0
Change in Amount of Time in Direct Client Contact in STI and HIV Care in Last 5 Years	250	
Increased	139	55.6
Decreased	33	13.2
Remained the same	78	31.2

Table 3. Frequency of Care for Client Groups

Client Population	Never n(%)	Rarely n(%)	Sometimes n (%)	Often n(%)	Always n(%)
How often you provide care to:					
a. Women who have sex with men	2 (0.7)	12 (3.9)	36 (11.8)	154 (50.5)	101 (33.1)
b. Women who have sex with women	58 (19.4)	144 (48.2)	88 (29.4)	6 (2.0)	3(1.0)
c. Men who have sex with women	8 (2.7)	32 (10.6)	65 (21.6)	119 (39.5)	77 (25.6)
d. Men who have sex with men	44 (14.5)	113 (36.0)	86 (28.3)	44(14.5)	17 (5.6)
e. Youth (14-25yrs)	10 (3.3)	22 (7.3)	58 (19.1)	118 (38.9)	95 (31.4)
f. Aboriginal people	13 (4.3)	52 (17.0)	110 (36.1)	88 (28.9)	42 (13.8)
g. Commercial sex workers	76 (24.8)	109 (35.6)	65 (21.2)	46 (15.0)	10 (3.3)
h. Clients of sex workers	79 (26.0)	98 (32.2)	80 (26.3)	40 (13.2)	7 (2.3)
i. People with mental health challenges	21 (6.9)	80 (26.4)	130 (42.9)	57 (18.8)	15 (5.0)
j. Drug users	5 (1.6)	26 (8.5)	123 (40.1)	119 (38.8)	34 (11.1)
k. People with unstable housing	18 (5.9)	79 (25.7)	108 (35.2)	78 (25.4)	24 (7.8)

Table 4. Scope of Nursing Practice

Characteristic	n	%
Type of Care Provided	314	
Combination STI and HIV	238	75.8
STI only	56	17.8
HIV only	20	6.4
Provide Testing		
STI	248	79.0
HIV	244	77.7
Provide STI Treatment	270	86.2
Conduct Post-test Counselling	265	85.2
Percentage of Time in Direct Client Care Nursing Activities (per week)	Mean (SD)	
History and physical examination	35.2 (24.5)	
Harm reduction	18.4 (19.4)	
Pre-test counselling	12.8 (11.3)	
Treatment	9.3 (10.6)	
Post-test counselling	9.1 (8.6)	
Partner notification and referral	8.9 (11.7)	
Reporting	6.0 (5.9)	

Table 5. Comprehensive Assessment

How often do you carry out the following assessment activities?	Never n(%)	Rarely n(%)	Sometimes n(%)	Often n(%)	Always n(%)	Total (n)
a. Sexual health history	8 (2.6)	26 (8.5)	34 (11.1)	84 (27.4)	155 (50.5)	307
b. Bimanual/abdominal test for tenderness	99 (33.8)	9(3.1)	24(8.2)	66 (22.5)	95(32.4)	293
c. Dysfunctional bleeding assessment	59(20.2)	31(10.6)	62 (21.2)	67 (22.9)	73 (25.0)	292
d. Voiding problems assessment	63(21.6)	38 (13.1)	63 (21.6)	55(18.9)	72 (24.7)	291
e. Pap tests	119(40.6)	10(3.4)	25(8.5)	83(28.3)	56(19.1)	293
f. Inspect genitals	80(27.2)	16(5.4)	20(6.8)	79(26.9)	99(33.7)	294
g. Palpate inguinal nodes	92(31.3)	25(8.5)	33(11.2)	63(1.4)	81(27.6)	294
h. Inspect trunk and arms	74(25.4)	50(17.2)	69(23.7)	63(21.6)	35(12.0)	291
i. Cervical swabs	102(34.7)	6(2.0)	10(3.4)	74(25.2)	102(34.7)	294
j. Oropharyngeal swabs	104(35.4)	61(20.7)	72(24.5)	48(16.3)	9(3.1)	294
k. HSV culture	110(38.3)	65(22.6)	85(29.6)	21(7.3)	6(2.1)	287
l. Anal swabs	144(49.5)	71(24.4)	61(21.0)	12(4.1)	3(1.0)	291
m. Urethral swabs	118(40.5)	68(23.4)	73(24.7)	23(7.9)	9(3.1)	291
n. Vaginal swabs	104(35.9)	8(2.8)	21(7.2)	83(28.6)	74(25.5)	290
o. Urine testing	40(13.7)	10(3.4)	53(18.1)	132(45.1)	56(19.8)	293
p. Vaginal pH	177(60.8)	23(7.9)	30(10.3)	31(10.7)	30(10.3)	291
q. KOH Whiff test	193(66.8)	23(8.0)	27(9.3)	29(10.0)	17(5.9)	289
r. Venipuncture (blood draws)	85(28.8)	8(2.7)	41(13.9)	104(35.3)	57(19.3)	295
s. Prepare specimen slides	119(41.0)	12(4.1)	23(7.9)	75(25.9)	61(21.0)	290
t. Interpret microscopy	206(72.3)	26(9.1)	12(4.2)	19(6.7)	22(7.7)	285
u. Interpret lab results	33(11.2)	10(3.4)	38(12.9)	104(35.4)	109(37.1)	294

Table 6. Professional practice in HIV and STI testing*

When conducting testing, how often do you discuss the following topics with clients?	STI Testing n(%)	HIV Testing n(%)
Confidentiality	233(94.3)	236(97.6)
Informed consent	226(91.8)	230(95.1)
Non-nominal testing	180(74.0)	220(91.7)
Reporting process	222(89.9)	225(93.3)
Harm reduction	226(91.9)	223(92.6)
Transmission	242(97.5)	238(96.3)
Window periods for testing	229(93.1)	233(95.3)
Partner notification and follow up	230(93.1)	224(92.9)
Prevention of transmission to others	245(98.8)	234(97.1)
Personal support systems	189(76.5)	209(86.7)
Personal coping skills	173(69.8)	186(77.2)
Issues affecting health	105(42.3)	121(50.2)

* Response number and percentages are based on the number of PHN who reported conducting HIV (n=244) and STI (n=248) testing. The frequency count for calculation represents the number of participants who responded "often" or "always" on a range of 1 (never) to 5 (always) as the frequency with which they discussed the topics included in this table.

Table 7. STI Medication Administration and Dispensing Practices

Medication	Administer n(%)	Dispense n(%)
STI medication as treatment practice	264(84.3)	230(74.0)
Antibiotics (oral)	240(90.9)	204(89.0)
Antibiotics (IM)	59(23.0)	38(17.2)
Antiviral (oral)	55(21.4)	45(21.7)
Antifungals	111(43.2)	80(36.1)
Liquid nitrogen	56(21.8)	34(15.2)
Oral contraceptives	161(58.2)	139(61.4)
Emergency contraceptives	190(71.9)	165(72.0)
Other contraceptive agents	184(70.5)	160(71.4)
Immunizations (e.g., HPV, HBV)	243(92.4)	172(75.4)

Table 8. Referral Service provided by PHN

To which health care providers and/or services do you refer clients?	n(%)*
Physicians (general practitioners)	296(94.3)
Abortion services	230(73.5)
Mental health team	225(71.9)
Community organizations (e.g., AIDS service organizations, Options for Sexual Health)	205(65.5)
Rape support services	172(55.0)
Physicians (specialists)	159(50.8)
Social workers	146(46.6)
Registered nurses	125(39.9)
Pharmacists	125(39.9)
Health care providers specializing in viral hepatitis	121(38.7)
BC Centre for Excellence in HIV/AIDS	106(33.9)
Nurse practitioners	91(29.1)
Spiritual support	73(23.3)
Elders	48(15.3)

* The number and percentage are calculated on an overall n=313, 2 of whom reported not providing referral services.

Table 9. HIV Post-Test Counselling Practices

Counselling Area of Practice	Never n(%)	Rarely n(%)	Sometimes n(%)	Often n(%)	Always n(%)	Total (n)
In post-test counseling with clients how often do you discuss:						
a. Preventing transmission to others	--	1 (0.4)	10 (3.8)	61 (23.1)	192 (72.7)	264
b. Harm reduction	--	--	13(4.9)	65 (24.6)	186(70.5)	264
c. Preventing reoccurrence	3(1.1)	2(0.8)	22(8.4)	71(27.1)	164(62.6)	262
d. Risk factors	--	9(3.4)	29(11.0)	72(27.3)	154(58.4)	264
e. Recommended treatment	11(4.2)	16(6.1)	41(15.5)	48(18.2)	148(56.1)	264
f. Treatment options	13(4.9)	18(6.8)	44(16.7)	61(23.2)	127(48.3)	263
g. Support systems	1(0.4)	10(3.8)	66(25.0)	74(28.0)	113(42.8)	264
h. Contraception choices	7(2.7)	19(7.2)	45(17.0)	89(33.7)	104(39.4)	264
i. Re-infection	7(2.7)	15(5.7)	63(24.0)	78(29.8)	99(37.8)	262
j. Partner counseling	6(2.3)	22(8.4)	68(26.1)	77(29.5)	88(33.7)	261
k. Substance use	1(0.4)	13(4.9)	88(33.4)	86(32.6)	76(28.8)	264
l. Complications	2(0.8)	25(9.6)	92(35.4)	70(26.9)	71(27.3)	260

Table 10. Reporting activities

How often do you carry out following reporting activities?	Never n(%)	Rarely n(%)	Sometimes n(%)	Often n(%)	Always n(%)	Total (n)
a. Case follow up for reportable infections	40(13.2)	37(12.2)	58(19.1)	79(26.1)	89(29.4)	303
b. Partner notification and follow up	47(15.6)	39(13.0)	77(25.6)	76(25.2)	62(20.6)	301
c. Partner notification outside of BC	184 (62.0)	73(24.6)	30(10.1)	6(2.0)	4(1.3)	297
d. Documentation using the Health 208 form	83(27.9)	32(10.7)	49(16.4)	56(18.8)	78(26.2)	298
e. Documentation using the Health 219 form	164 (61.9)	35(13.2)	39(14.7)	15(4.8)	12(4.5)	265
f. Documentation using the Health 225 form	180(70.0)	38(14.8)	22(8.6)	10(3.9)	7(2.7)	257
g. HIV case report form	181 (60.7)	46(15.4)	33(11.1)	17(5.7)	21(7.0)	298
h. HIV/AIDS risk assessment questionnaire	171(58.6)	33(11.3)	31(10.6)	31(10.6)	26(8.9)	292
i. Documentation using Hepatitis B enhanced surveillance form	205 (70.2)	50(17.1)	28(9.5)	5(1.7)	4(1.3)	292

Table 11. Health Education Topics

Client Educational Resource Topics	n(%)
Safer sex	257(83.7)
Risk factors	237(78.2)
Infection	236(78.1)
Contraception	226(73.4)
Harm reduction	199(65.8)
Treatment options	175(58.1)
Healthy sexuality	150(49.4)
Support groups	78(25.9)
Counselling referral	77(25.4)
Two spirit	24(9.1)

Table 12. PHN Reports of Satisfaction in Work Environment

Work Environment Characteristic	Satisfied n(%)	Not-Satisfied n(%)	Total Responses (n)
Amount of time to review lab/other test results	264(88.3)	35(11.0)	299
Amount of time for client appointments	259(86.9)	39(13.1)	298
Amount of time to respond to messages	261(86.4)	41(13.6)	302
Clinic location	255(83.1)	52(16.9)	307
Available appropriate equipment	248(81.8)	55(18.2)	303
Hours of practice	247(81.0)	58(19.0)	305
Work load is manageable	248(80.0)	62(20.0)	310
Amount of administrative support	213(70.3)	90(29.7)	303
Physical space	214(69.7)	93(30.3)	307

