# PROGRAM EVALUATION OF THE SUPPORTING INTERDISCIPLINARY PRACTICE: THE FAMILY PHYSICIAN/NURSE PRACTITIONER EDUCATIONAL AND MENTORING PROGRAM

**Technical Report**

**Submitted to The Ministry of Health and Long Term Care, Ontario Canada**

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## EXECUTIVE SUMMARY

### Introduction

The Supporting Interdisciplinary Practice: Educational and Mentoring Program for Nurse Practitioners and Family Physicians (SIP) was developed in response to primary health care renewal efforts in Ontario, Canada. Toward that end, The Ministry of Health and Long Term Care funded 117 nurse practitioner positions for underserviced areas of the province as part of its primary care renewal program.

The goal of this demonstration project was to improve the delivery of primary health care to Ontarians through the development of collaborative practices and the successful integration of the NPs in the 117 new positions. The program provided assistance to these new teams for one year through three components: mentoring by experienced family physician/ nurse practitioner pairs, education on collaborative practice, and web based networking.

Eleven nurse practitioner (NP) and family physician (FP) mentor pairs were recruited based on their skill set, personality, experience, and type and location of practice. They came from a variety of practice settings such as community health centres, academic teaching units and solo practices. The mentor teams were representative of different areas of the province: the north (2), northwest (2), central (2), east (1), south (1) and southwest (3). Each pair was to mentor up to 10 NP/FP teams.

The 11 mentor pairs completed a self-instructional workbook to introduce them to the *Structured Collaborative Practice Model*© developed by Jones and Way and attended a workshop that prepared them for their roles and responsibilities. The model was presented to the mentors through a self-instructional guide. Reflective exercises were included to allow them to apply their current knowledge and experience with collaboration to the model components. The major purpose of the workbook was to ensure that the mentors had a common language and understanding of collaboration that could be used with their teams.

For the new NP/FP teams, the educational component was first presented during a one and one half day workshop. Participants who attended this orientation were identified as Group 1. During this time, the *Structured Collaborative Practice Model*© and exercises were

presented. Group 2 teams joined the existing teams 6 months later. They received their education electronically, completing the exercises independently with a follow-up teleconference orientation with the SIP NP facilitator.

The *Structured Collaborative Practice Model*© describes how health care providers can use their separate and shared knowledge and skills to deliver comprehensive care in an efficient and effective manner, while retaining the integrity of each profession. The model is patient/family/community centred and is focused on a continuum from independent (within each professional scope of practice) or parallel practice through consultation/referral to interdependent, co-provision of care (see below).

**Independent Parallel Practice** | **Consultation/ Referral** | **Interdependence Co-provision of Care**

**Sole Responsibility** ←→ **Shared Responsibility**

Way and Jones have defined collaborative practice as a process for communication and decision making that enables the separate and shared knowledge and skills of the care providers to synergistically influence the client/patient care being provided (Way, Busing, and Jones, 2000)[1]. The *Structured Collaborative Practice Model*© demonstrates the relationship between the health providers, the patient/family/community and the practice setting and is based on this definition of collaborative practice.

As such, health care providers use their separate and shared knowledge and skills to deliver comprehensive care in an efficient and effective manner, while retaining the integrity of each profession, and in a manner that is patient/family/community centred. Collaboration occurs within a spectrum, i.e., a continuum from independent (within each professional scope of practice) or parallel practice through consultation/referral to interdependent, co-provision of care and evolves toward increased interdependence. Collaboration is dependent on the presence of seven essential elements: co-operation, assertiveness, autonomy,

responsibility/accountability, communication, co-ordination and mutual trust and respect. The model addresses different practice settings or local, distinct and multiple variables that influence collaboration.

All participants participated in team exercises that required them to: develop a common purpose, complete a provider inventory for role clarity, assess their practice for supports and constraints, develop a plan for their collaboration and apply the seven essential elements to clinical case examples

**Purpose**

The purpose of the evaluation was to determine the impact of the SIP program components on the development of collaborative practices and the successful integration of the NP role into the 117 positions. Specifically, the following questions were addressed:

1. Is there evidence of increased NP role integration?
2. Is there evidence of increased collaboration?
3. What factors facilitated or hindered collaboration and integration?
4. What are the recommendations for future collaborative efforts?

**Methodology**

A data triangulation methodology was used to examine the effectiveness of the SIP program using three main data sources: quantitative pre and post program surveys, qualitative post program interviews with key informants and patient encounter data collected from the Ministry of Health and Long Term Care (MOHLTC) that tracked the activities of the NPs. The mixed method of analysis (quantitative and qualitative data) provided the opportunity to examine and compare different and complementary aspects of the SIP program. The surveys provided information from NPs and FPs about their practice environment, their assessment of the collaborative relationship, and their appraisal of barriers and facilitators to practice. By collecting data before and after the program, the survey data was able to examine change as the collaborative relationships evolved. The interviews also asked about facilitators and barriers to collaboration as well as overall impressions of specific aspects of the program (mentoring, educational components, model and exercises), successful strategies for collaboration and recommendations for future practice. The MOHLTC performance data, which comprised of quarterly assessments of the scope and type of NP activities throughout the program, allowed for a comparison with the NP role survey data.

**Key Findings**

- Trends of increased role integration and collaboration were seen following the program. Both NPs and FPs reported higher collaborative scores, higher satisfaction with collaboration, greater benefits to collaboration, more referrals and bi-directional consultations and for the FPs, greater NP role clarity. Due to high pre program scores, a ceiling effect occurred, potentially obscuring significant program differences.

- Significant differences were identified in NP functioning within their full scope of practice. More patients were seen, NPs increased service delivery within their extended role, and they reported being the primary provider to significantly more patients. However, due to potential confounds in the program design, it is unclear whether these increases were due solely to the SIP program.

- NPs and FPs had a different focus regarding collaboration, the role of the NP within the practice and the facilitators that influence NP role integration and collaboration. The FPs focused on working conditions and NP competencies whereas the NPs focused on collaborative practices and interactional issues with their FP.

- The strengths of this demonstration project lie in the lessons learned and the identification of facilitators and barriers to interdisciplinary practice, which are detailed in the participants' recommendations for future collaborative efforts.

**Recommendations regarding future collaborative practice**

- SIP program should continue for new teams and involve a screening process to ensure participant interest
- Ensure that mentors are from the same practice type and are experienced
- Identify clear expectations and roles of both mentors and teams from the beginning
- Ensure technology is functioning well and is accessible
- Provide education about the role and scope of practice of the NP for the public, FPs and other health care professionals
- Develop roles, policies/procedures and written directives early on in the collaboration
- Define roles in relation to the needs of the practice

- Use models of agreements that have been shown to be effective
- Have a formal system in place to review cases and identify methods of communication
- Utilize team decision-making techniques
- Have a low FP / NP ratio
- Change the fee structure of the FPs to support collaborative practice
- Develop collaborative toolkits

**Recommendations addressing identified facilitators and barriers for collaborative practice**

*Systemic*

Address systemic barriers to collaboration, including:

- Regulations associated with NP prescriptive authority
- Regulations associated with NP laboratory list restrictions
- Regulations associated with restrictive health policies
- FP financial disincentives associated with collaborative practices
- Guidelines regarding liability for both NPs and FPs
- Performance data collection methods and reporting

*Organizational*

- Develop coordinated practice guidelines addressing both FP and NP concerns
- Provide dedicated administrative support
- Review funding requirements to support NP activity
- Provide educational material/training to associated health care professionals regarding the NP role

*Patient*

- Address need to ensure the public/patients understand of the extended role functioning of NPs.

## METHODOLOGY

### Instruments

*The Jones Way Collaborative Practice Questionnaire* (see Appendix A) was administered before and after the program. Demographic information covering gender, age, education, work experience and years of experience with collaboration were collected for all participants. The self-administered survey also included nine items that measured the provider's experience of collaborative practice and eleven items measuring the provider's satisfaction with the collaborative experience. These measures of the collaborative experience are based on essential elements and satisfaction with collaboration adapted from Baggs (1994)[2]. Specifically, the first measure (Measure of Current Collaboration) asked participants to rate their experience of collaborative practice on a 7-point Likert scale for: planning, communication, shared responsibility, cooperative decision-making, shared concerns about patient care, coordination of care, trust, respect and collaboration.

The second scale (Satisfaction in Current Collaboration) measured the degree of satisfaction for: shared planning, open communication, shared responsibility, cooperation, consideration of both nursing and medical concerns, shared planning, respect and trust for one another's knowledge and skills, collaboration in making decisions, the decision-making process and collaboration about decisions regarding patient care. As with the other scale, participants were asked to rate their current level of satisfaction for these factors on a 7 point Likert scale where 1 = strongly satisfied, 2 = satisfied, 3 = somewhat satisfied, 4 = neutral, 5 = somewhat dissatisfied, 6 = dissatisfied and 7 = very dissatisfied.

The FPs' collaborative practice questionnaire also included a measure examining their perception of the appropriateness of various patient vignettes for NP assessment and decision making as a reflection of their understanding of the NP role. Nine vignettes concerned with health education, psychosocial support and high-risk medical conditions as developed by Davidson and Lauver[3] (1984) were used. In the Davidson and Lauver original research NP and FP respondents identified three of the vignettes as most appropriate for NPs, three as most appropriate for physicians and three as appropriate for either NPs or physicians.

*Role Surveys* (see Appendix B)

Two role surveys were used for this study--The Nurse Practitioner Role Questionnaire and the Physician Questionnaire. These surveys were adapted from The IBM McMaster University study[4] to reflect the 117 NP positions and were administered pre and post-program. The NP Role Questionnaire collected information regarding NP demographics, practice descriptors, NP job satisfaction using the Misener NP Job Satisfaction Scale[5], and perceptions/experiences of barriers and facilitators to practice. The Physician Questionnaire collected information regarding physician demographics, practice descriptors, satisfaction with the NP role and perceptions/experiences with barriers and facilitators. Several of the same questions were posed on both questionnaires to allow for cross comparisons.

*Key Informant Interviews* (see Appendix C)

Key informant interviews were administered post-program. The team key informant interviews were conducted for both high and low participants. High participants were those who had completed 50% or more of the program activities. Low participants were those who completed less than 50% of the program activities. The key informant interviews delved into the specifics of the SIP program including those aspects which helped/hindered collaborative practice, details regarding the structure of the collaboration, the effect of the mentoring, education and support provided and recommendations for supporting the future development of new collaborative teams and mentoring. Since the same questions were used for all of the interviews, group comparisons were possible.

*Ministry of Health Long-term Care (MOHLTC) Performance Report*

The Performance Report is a MOHLTC checklist comprised of the number of NP/patient encounters as well as the specific professional activities accomplished by the NPs during their shifts. It contains six sections, each having several items: patient encounter (4 items), disease prevention strategies with immunization (10 items) and screening (17 items), curative care: diagnosis and treatment (6 items), rehabilitative care (6 items), supportive care (5 items) and consultations/referrals (11 items).

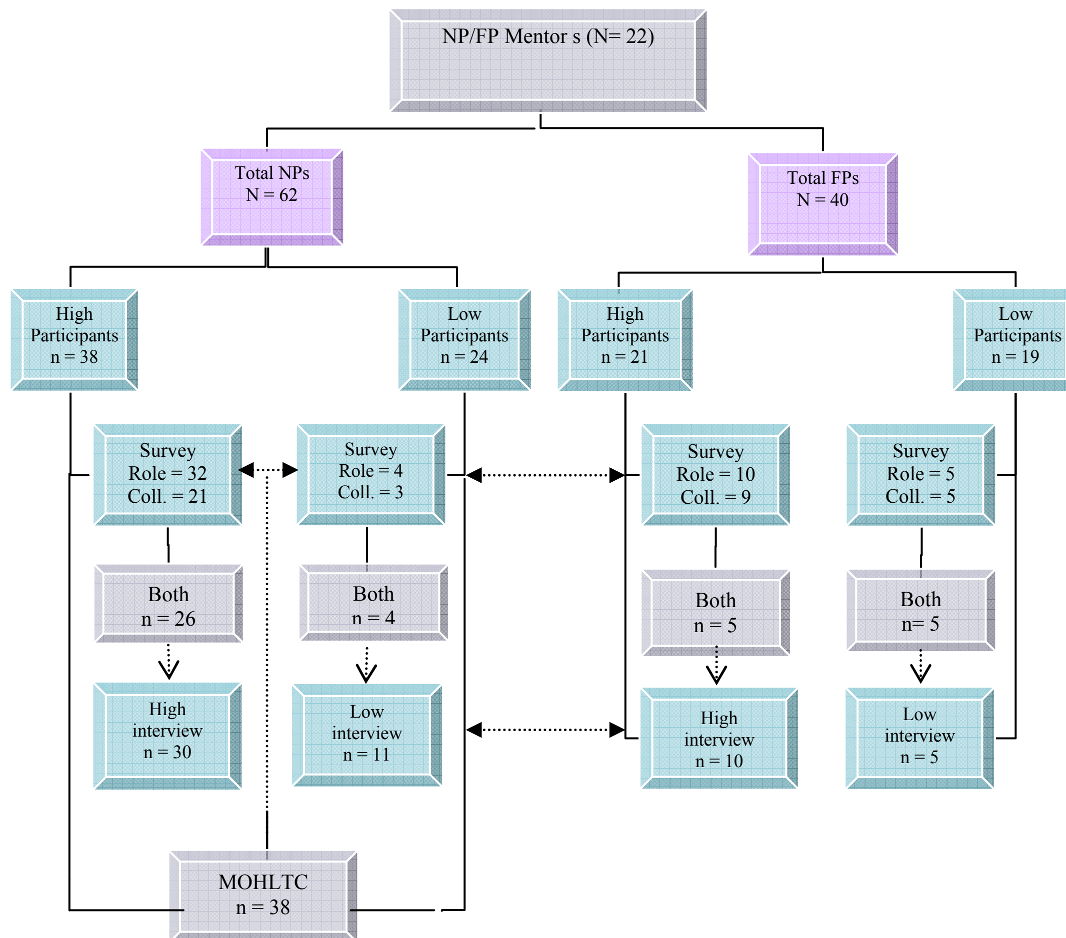
As part of their daily work, nurses are asked to give an account on their encounters with patients and professional activities by checking each appropriate item on the performance report, as it happens.  Individual reports are then sent to MOHLTC, which, in turn, calculates the data for each practice setting for every 3-month period. Although not intended as a measure for the SIP program, performance reports were used to provide data

relative to NPs' role integration and collaborative practices. More specifically, role integration was defined by the number and ratio of curative and rehabilitative care and the number of referrals. Collaborative practice was identified by the number of consultations with their FP partner and other health care professionals.

**Research design**

A data triangulation methodology was used to examine the effectiveness of the SIP program using three main data sources: quantitative pre and post program surveys, qualitative post program interviews and patient encounter data collected from the MOHLTC that tracked the activities of the NPs (see Figure 1).

**Figure 1. Data triangulation methodology and sample sizes**




The dashed arrows in Figure 1 represent how the data was analyzed. As indicated earlier, NPs and FPs involved in the program were categorized as "high" or "low" participants based on their level of participation. Individuals who were involved in the teleconferences, workshops and/or exercises, fifty percent of the time or more, were identified as "high participants". Individuals who attended the orientation and participated up to 50% in the teleconferences, workshops and/or exercises were defined as "low participants".

*Data triangulation*

MOHLTC data was compared to the NP survey results. The survey data of both NPs and FPs were compared to the interview data. Finally, all of the interview groups (NP high participant, FP high participant, and low participants) were compared to each other.

**Procedure and plan of analysis for the quantitative data**

*Procedure*

The pre program role and collaborative surveys were presented to Group 1 participants at the orientation meeting. Group 2 participants completed the surveys on-line. Following the intervention, all participants were mailed the post program surveys. Participants were provided the opportunity to return the surveys via the mail, fax or to complete them on-line. Two reminders were sent to all participants who had not returned the surveys by the deadline. Only those individuals who completed both the pre and program surveys were included in the analyses.

*Quantitative data analyses plan*

Data screening procedures for grouped data were performed including: determining the accuracy of computer input, checking for missing data and testing for normal distribution, homogeneity of variance and univariate outliers. For the examination of univariate outliers, standardized residuals were computed to determine if they were less that 3.29 ($p=.001$). To address univariate normality, skewness and kurtosis, values of the dependent variables were examined to determine if they were less than $|3|$, along with a visual examination of the histograms superimposed on the normal curve. Univariate homogeneity of variance was tested using Fmax and Levine's test. Outliers were replaced with the mean value.

Data analyses were conducted using the statistical software program SPSS (Version 10.0). Frequency tables were generated for categorical and nominal data. Descriptive statistical procedures were used on continuous and categorical variables. To compare sites over time, contingency table analysis and chi-square statistics were generated for categorical data and for continuous data, repeated measures analyses of variance were used along with tests for multiple comparisons (t-tests and multiple linear regression analyses).

**Procedure and plan of analysis for the qualitative data**

*Procedure*

Participants were contacted by email and/or telephone for a total of three contacts. For those candidates who expressed interest in participating, telephone interviews were planned for a mutually agreeable time. The interview guide was emailed to the participant in advance of the telephone interview. The interviews lasted approximately 30 minutes and interviewees were compensated for their time.

*Data coding and analyses*

The interview data was analyzed using content analysis based on principles outlined by Caudle (1994)[6]. This involved examining the interview responses for common themes. First, the data was unitized (i.e., units of data such as words, sentences, or multi-sentence chunks that can be analysed for meaning were selected). The units were then coded into categories, which represented common ideas or themes. Finally, the categories were examined and common themes identified. The interview questions were used to structure the coding and analysis of data. The data was then examined for categories that emerged for more than one question. This allowed for common themes both within and across questions.

*Inter-rater reliability*

In order to establish inter-rater reliability, a sub-sample of interviews for both the high participants interviews (n = 19) and the low participant interviews (n = 5) were coded by a second rater. Codes were then compared and percent agreement was calculated for each interview. The percent agreement ranged from 78% - 90%, with an average of 82%. Differences were discussed and resolved by consensus. For this analysis, the differences in coding were all minor, and consensus was readily obtained.

**Procedure and plan of analysis for the MOHLTC Performance reports**

*Procedure*

Seventy-seven NPs from 75 practice settings completed performance reports covering the April 2004 –March 2005 period. At sites that had two NPs, the data was added and divided by two. NPs who left their position during data collection or who had missing data for more that one quarter were excluded from the analyses.

*Plan of analyses*

Descriptive statistics (frequencies) were calculated on each individual item. As well, bi-variate and multivariate analyses were conducted on the aggregated data for each of the six categories, with the exception of the patient encounters and the consultation/referral category (where components of the category were also examined). Repeated-measures analysis of variance was used to examine differences in the variables across the four time periods.

# RESULTS

### *QUANTITATIVE ANALYSES OF PRE-POST PROGRAM SURVEYS*

**Sample characteristics**

Forty-three NPs completed the initial role survey while 36 completed the final survey, giving an 84% response rate. From that same sample, 41 NPs completed the initial collaborative survey and 24 NPs responded to the post collaborative survey (59% response rate). Twenty-eight FPs completed the pre program role survey and one year later, 15 completed the final role survey, with a response rate of 54%. Thirty FPs completed the pre collaborative survey while 14 of those responded to the post collaborative survey, resulting in a 47% response rate.

Since the data analyses were based on a repeated measures matched analyses, the final sample consisted of those individuals who completed both the pre and post surveys (see Table 1).

**Table 1. Final sample for SIP quantitative analyses**

| | NP role | NP coll. | FP role | FP coll. |
|---|---|---|---|---|
| Final sample | 36 | 24 | 15 | 14 |

**Nurse practitioner characteristics**

The following section describes demographics of the NP and their education experience. Table 2 lists the sample characteristics of the NPs based on the role survey data.

**Table 2. NP characteristics**

| Characteristic | Mean | *SD* | Min | Max |
|---|---|---|---|---|
| Age | 42.15 | 7.6 | 29 | 54 |
| Number of years nursing | 19.58 | 9.4 | 2 | 33 |
| Number of months as a licensed RN(EC) | 18.8 | 24.4 | 1 | 84 |
| Number of months in collaborative practice with | | | | |

| Characteristic | Mean | *SD* | Min | Max |
|---|---|---|---|---|
| current FP (collected pre program) | 7.21 | 8.2 | 0 | 36 |

Thirty-five of the NPs were female and 1 was a male.

*Current working situation of NPs*

The current working situation describes the practice setting (see Table 3), percentage of time spent in different categories of duties and the type of patients served (age, gender, groups, number of patients served, number of patients as primary provider, how patients are assigned).

**Table 3. NP practice setting**

| Practice setting | Frequency | Percentage |
|---|---|---|
| Aboriginal health access centre | 1 | 2.8 |
| Community health centre | 5 | 13.9 |
| Community nursing agency | 1 | 2.8 |
| Academic setting | 3 | 8.3 |
| Family health network | 2 | 5.6 |
| Family practice unit | 4 | 11.1 |
| Health service organization | 1 | 2.8 |
| Long term care facility | 2 | 5.6 |
| FP office | 1 | 2.8 |
| Mental health service | 3 | 8.3 |
| Other | 4 | 11.1 |
| Other hospital department | 4 | 11.1 |
| Solo physician practice | 1 | 2.8 |
| Missing | 4 | 11.1 |

The average number of hours that the NPs worked per week was 34.5 ($SD$ = 10.6) at a site that had about 3-4 physicians. Most of the NPs worked in community based agencies.

**Table 4. Type of patients served by NPs before and after program**

| Patient characteristics | Before program | | | After program | | |
|---|---|---|---|---|---|---|
| | N | Mean | STD | N | Mean | STD |
| **Age** | | | | | | |
| % of patients 0-12 yrs | 36 | 17.75 | 19.263 | 36 | 5.57 | 14.4 |
| % of patients 13-18 yrs | 36 | 10.64 | 9.439 | 36 | 10.64 | 8.98 |
| % of patients 19-64 yrs | 36 | 43.78 | 24.452 | 36 | 49.19 | 22.39 |
| % of patients 65+ yrs | 36 | 22.28 | 18.699 | 36 | 25.70 | 23.64 |
| **Gender** | | | | | | |
| % of patients - female | 36 | 56.11 | 22.010 | 36 | 63.61 | 11.37 |
| % of patients – male | 36 | 35.56 | 17.557 | 36 | 36.39 | 11.37 |

As Table 4 indicates, most of the patients seen are females and between the ages of 19-64 years. Table 5 shows that the NPs treated a wide range of specific populations.

**Table 5. Number of NPs who treat specific populations before and after program**

| | Before program | | After program | |
|---|---|---|---|---|
| | N | Frequency (%) | N | Frequency (%) |
| Aboriginals | 36 | 7 (19.4) | 36 | 5 (13.9) |
| Abused women | 36 | 7 (19.4) | 36 | 5 (13.9) |
| Immigrants | 36 | 2 (5.6) | 36 | 4 (11.1) |
| Mental health care | 36 | 7 (19.4) | 36 | 10 (27.8) |
| Orphan patients | 36 | 12 (33.3) | 36 | 15 (41.7) |
| Seniors | 36 | 8 (22.2) | 36 | 8 (22.2) |
| Children | 35 | 7 (19.4) | 36 | 10 (27.8) |
| Babies | 36 | 11 (30.6) | 36 | 9 (25.0) |
| Women's health | 36 | 13 (36.1) | 36 | 11 (30.6) |

*Funding sources*

The following section focuses on the funding aspects associated with NP involvement. NPs were asked to identify their source of funding and how their physician partners were paid.

**Table 6. How NPs were paid**

| NP payment method | Frequency | Percentage |
|---|---|---|
| Direct employer | 20 | 55.6 |
| Don't know | 1 | 2.8 |
| Independent contractor | 4 | 11.1 |
| Other | 4 | 11.1 |
| Transfer payment | 6 | 16.7 |
| Missing | 1 | 2.8 |
| Total | 36 | 100.0 |

**Table 7. NP perception of how FPs were paid**

| FP payment method | Frequency | Percentage |
|---|---|---|
| Capitation | 3 | 8.3 |
| Combination | 6 | 16.7 |
| Don't know | 4 | 11.1 |
| Fee-for-service | 12 | 33.3 |
| Other | 3 | 8.3 |
| Salary | 6 | 16.7 |
| Missing | 2 | 5.6 |
| Total | 36 | 100.0 |

Most of the NPs were employees (with some being seconded to a site and paid by a transfer payment agency) while FPs revenue was predominantly from fee-for service. The payment method according to the FPs was consistent with NP reports.

*Proposal development involvement*

Tables 8 and 9 examined whether the NP was involved in the development of the position proposal and job description.

**Table 8. NP involvement in the development of the NP position proposal**

| Involved | Frequency | Percentage |
|---|---|---|
| Yes | 17 | 47.2 |
| No | 16 | 44.4 |
| Don't know | 1 | 2.8 |
| Missing | 2 | 5.6 |
| Total | 36 | 100.0 |

**Table 9. NP involvement in developing the NP job description**

| Involvement | Frequency | Percentage |
|---|---|---|
| Yes | 26 | 72.2 |
| No | 6 | 16.7 |
| Don't know | 2 | 5.6 |
| Missing | 2 | 5.6 |
| Total | 36 | 100.0 |

About half of the NPs were involved in developing the proposal and 72% were involved in developing their job description.

### FP characteristics

Gender of the FPs included 5 females and 9 males. The average age of the FPs was 43 years (STD = 9.3). The physicians' have been practicing in family medicine between 4 and 32 years. Table 10 describes their practice settings.

**Table 10. FP practice setting**

| FP practice setting | Frequency | Percentage |
|---|---|---|
| Community health centre | 1 | 7.1 |
| Community nursing agency [VON or public health] | 1 | 7.1 |
| Aboriginal health access centre | 2 | 14.3 |

| FP practice setting | Frequency | Percentage |
|---|---|---|
| Family health network/primary care network | 3 | 21.4 |
| Solo physician practice | 1 | 7.1 |
| Group physician practice | 2 | 14.3 |
| Family practice unit | 1 | 7.1 |
| Missing | 3 | 21.4 |
| Total | 14 | 100.0 |

From this sample, the FPs' practice setting was varied across the categories.

*FP involvement in collaboration proposal and job description*

Tables 11 and 12 examine whether the FPs were involved in the development of the NP position proposal and the NP job description.

**Table 11. FP involvement in developing the NP position proposal**

| Involvement | Frequency | Percentage |
|---|---|---|
| No | 4 | 28.6 |
| Yes | 7 | 50.0 |
| Missing | 3 | 21.4 |
| Total | 14 | 100.0 |

**Table 12. FP involvement in developing the NP job description**

| Involvement | Frequency | Percentage |
|---|---|---|
| No | 2 | 14.3 |
| Yes | 9 | 64.3 |
| Missing | 3 | 21.4 |
| Total | 14 | 100.0 |

Based on this sample, most of the FPs were involved in developing both the proposal for the NP position and the job description.

Tables 13 and 14 examine whether there was an orientation offered to the FPs and the health care team prior to or on the arrival of the NP and how they became involved as the collaborating FP.

**Table 13. Orientation for FP and health care team to the NP role prior to or upon arrival of NP**

| Orientation | Frequency | Percentage |
|---|---|---|
| No | 6 | 42.9 |
| Not applicable | 1 | 7.1 |
| Yes | 4 | 28.6 |
| Missing | 3 | 21.4 |
| Total | 14 | 100.0 |

**Table 14. How did you become involved as the collaborating FP for the NP in the 117 positions?**

| Involved as collaborating partner | Frequency | Percentage |
|---|---|---|
| I worked at the sponsoring agency | 1 | 7.1 |
| My practice applied for the position | 5 | 35.7 |
| Sponsoring agency recruited me | 2 | 14.3 |
| Other | 3 | 21.4 |
| Missing | 3 | 21.4 |
| Total | 14 | 100.0 |

Forty-three percent of the FPs stated that there was no orientation to the NP role even though 36% of the FP practices had applied for the NP position.

*Current working situation of FPs*

The following section describes the current working situation of the FPs. This includes: the length of time working with the collaborating NP, the amount of time available to NP, the amount and method of interaction, the frequency of patient referral by the NP, payment method, incurred NP related expenses and a ranking of services provided by NP.

At the start of the program, the FPs had been working with the collaborating NP for an average of 8 months (*SD* = 9.8). Over half of the FPs (53.3%) worked in the same location with the NP. Forty percent of the FPs had regularly scheduled meetings; however 93 percent indicated that they made themselves available when needed. The method of interaction according to the FPs consisted of 53% unplanned communications and 60% of discussions over the phone. An average of 8 hours a week was spent working directly with the NP (*SD* = 11.8).

Tables 15 and 16 examine the method of patient referral to the FP from the NP and vice versa.

**Table 15. Referral by NP to FP**

| Referral by NP | Before Program | | After Program | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| As needed | 3 | 20.0 | 3 | 20.0 |
| Often | 1 | 6.7 | 3 | 20.0 |
| Rarely | 1 | 6.7 | 4 | 26.7 |
| Sometimes | 9 | 60.0 | 5 | 33.3 |
| Missing | 1 | 6.7 | 0 | 0 |
| Total | 15 | 100.0 | 15 | 100.0 |

**Table 16. Referral by FP to NP**

| Referral by FP | Before Program | | After Program | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| As needed | 2 | 13 | 2 | 13.3 |
| Often | 2 | 13.3 | 4 | 26.7 |
| Rarely | 2 | 13.3 | 4 | 26.7 |
| Sometimes | 8 | 53.3 | 4 | 26.7 |
| Missing | 1 | 6.7 | 1 | 6.7 |
| Total | 15 | 100.0 | 15 | 100.0 |

As with all of the FP data, because the sample size was so small, results should be interpreted with caution. Nevertheless, Tables 15 and 16 indicate a trend from before the program to after the program. Initially, for both groups (as reported by the FPs), the highest category reported for referrals was "sometimes". Following the program, the "sometimes" category was reduced by 50% and divided into either the "often" or "rarely" categories, suggesting a clearer understanding of NP functioning within their scope of practice, however, a pre-post program chi square analysis did not indicate significant differences.

Regarding costs associated with the NP in the practice, 53% of the FPs indicated that they did not incur additional NP related expenses. Of those who did incur additional costs, the average total overhead cost related to the presence of the NP was $6,785.00 (range = $0-$45,000).

When examining services provided by the NP, Figures 2 and 3 show the FPs' perspective of the top services provided by the NP before and after the program.

**Figure 2. FP ranking of top services provided by NP before program**

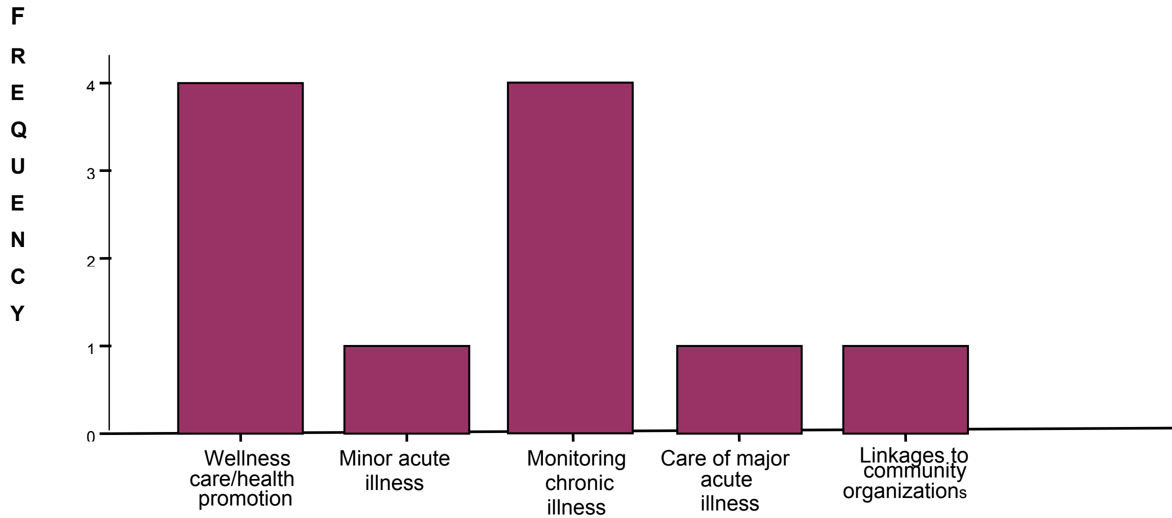
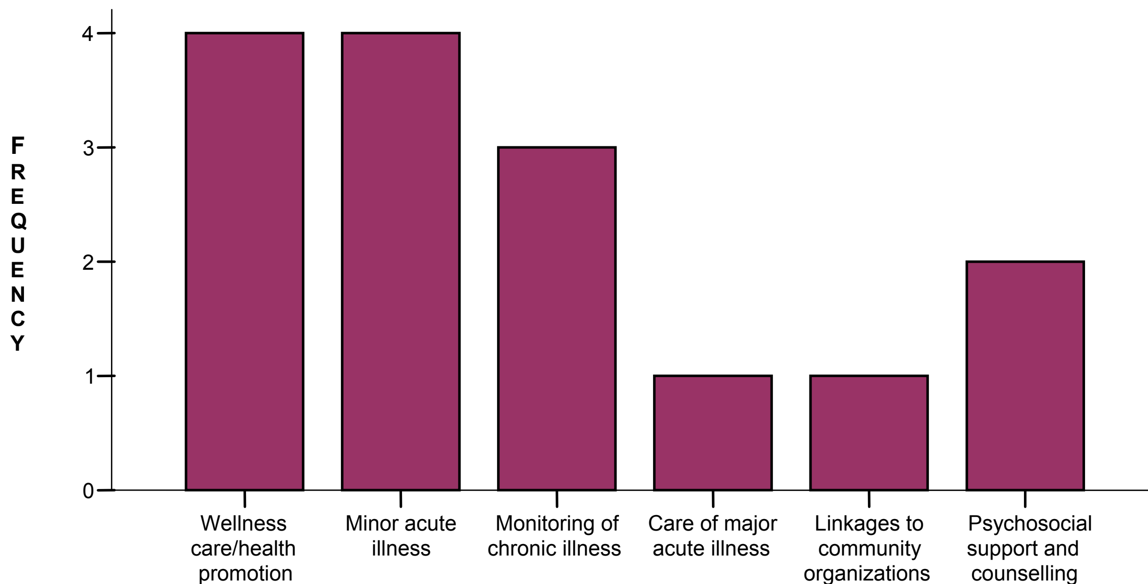



**Figure 3. FP ranking of top services provided by NP after the program**



The histograms indicate that the top services provided by the NPs according to the FPs changed from monitoring chronic illness and wellness care/health promotion to wellness care/health promotion and minor acute illness.

### *Outcome measures*

This section describes the pre and post program responses for both NPs and FPs related to: 1) role clarity, 2) functioning within scope of practice, 3) satisfaction levels, and, 4) collaborative practice

**Role clarity**

The first outcome measure addressed the NPs' perception of whether their role was clearly defined before and after the program.

**Table 17. NP report of role clarity before and after the program**

| NP response | Before program | | After program | |
|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage |
| | | | | |
| No | 10 | 27.8 | 10 | 27.8 |
| Yes | 24 | 66.7 | 25 | 69.4 |
| Missing | 2 | 5.6 | 1 | 2.8 |
| Total | 36 | 100.0 | 36 | 100.00 |

As Table 17 indicates, the program appeared not to influence the NPs' perception of whether their role was clearly defined. Sixty-seven percent of the NPs felt their role was clearly defined before the program, a finding that stayed consistent. However, about a third of the NPs did not feel that their role was clearly defined, either before or after the program. Significant differences were not found pre and post program.

**Table 18. FP report of NP role clarity before and after the program**

| FP response | Before program | After program |
|---|---|---|

| | | Frequency | Percentage | Frequency | Percentage |
|---|---|---|---|---|---|
| | | | | | |
| | No | 7 | 46.7 | 4 | 26.7 |
| | Yes | 7 | 46.7 | 11 | 73.3 |
| | Missing | 1 | 6.7 | | |
| | Total | 15 | 93.3 | 15 | 100.00 |

Unlike the NP results, the FPs did appear to be slightly impacted by the program with regard to NP role clarity. Following the program, 27% of the FPs felt that the NP role was more clearly defined, however a chi-square analysis did not indicate significant before-after differences, $\chi^2$ (2,15) = .820.

**Functioning within scope of practice**

A change in function within the NP scope of practice relates to whether differences were found in the amount and type of services provided by the NP following the program.

*NP report of functioning within their scope of practice*

Tables 19 and 20 describe the amount of time and type of treatment services provided by the NPs both before and after the program.

**Table 19. Percentage of time in NP duties before and after program**

| Time | Before program | | | After program | | |
|---|---|---|---|---|---|---|
| | **N** | **Mean** | **STD** | **N** | **Mean** | **STD** |
| Time traveling | 35 | 1.37 | 2.713 | 10 | 5.0 | 4.94 |
| Time non-clinical: research, mentoring students, professional development | 36 | 6.61 | 12.084 | 35 | 4.26 | 4.09 |
| Time non-clinical: clerical | 36 | 9.47 | 11.545 | 36 | 9.47 | 11.545 |
| Time outside clinic- community presentations | 35 | 3.89 | 5.34 | 34 | 3.34 | 4.49 |

| Time | Before program | | | After program | | |
|---|---|---|---|---|---|---|
| Time outside clinic-home visits | 36 | 2.64 | 5.87 | 36 | 2.27 | 3.36 |
| Time in clinic-lab procedures | 36 | 4.69 | 16.12 | 36 | 2.08 | 3.06 |
| Time in clinic-direct patient care | 36 | 63.72 | 27.64 | 36 | 65.38 | 27.58 |

As Table 19 indicates, the NPs spent the majority of their time in direct patient care (64% before, 65% after). Of the other activities, only the amount of time traveling increased significantly, from 1.4 % to 5%, $t(2,9) = 2.5$, $p<.05$.

**Table 20. NP identification of services delivered before and after the program**

| Services delivered | Before program | | | After program | | |
|---|---|---|---|---|---|---|
| | N | Mean | STD | N | Mean | STD |
| Care for minor acute illness | 36 | 27.31 | 23.185 | 36 | 24.00 | 16.58 |
| Wellness care/health promotion | 36 | 29.64 | 20.392 | 34 | 30.26 | 16.04 |
| Other activities | 36 | 3.31 | 12.606 | 16 | 5.57 | 8.31 |
| Monitoring of chronic illness | 36 | 18.58 | 17.14 | 34 | 21.95 | 13.17 |
| Caring of major acute illness | 36 | 1.72 | 2.57 | 32 | 7.47 | 12.10 |
| Caring for palliative patients | 34 | .76 | 1.65 | 31 | 1.03 | 1.68 |
| Night and weekend on-call coverage | 36 | .69 | 1.89 | 31 | 1.68 | 4.34 |
| Linkages to community | 35 | 2.94 | 4.09 | 32 | 6.25 | 8.91 |
| Psychosocial support | 36 | 10.94 | 14.00 | 32 | 8.84 | 6.89 |

As noted in Table 20, the NPs reported that they spent most of their time in two treatment service areas: wellness care/health promotion (30% before, 30% after) and in the care of minor acute illness (27% before, 24% after). Monitoring chronic illness ranked third at 19% before and 22% after the program.

Following the program, two areas showed significant differences in the type of activities performed by the NP according to their surveys. The most significant change was an increase in treating major acute illness, from less than 2% to 7%, $t(2,31) = -2.6$, $p<.01$. Secondly, NPs spent more time establishing linkages in the community, increasing from 3 to 6%, $t(2,30) = -2.46$, $p<.05$.

*FP report of NP service delivery*

The FPs were asked to indicate which services the NPs provided and to rank the top three services they considered most valuable to the practice.

**Table 21. FPs report of service delivery provided by the NPs before and after the program**

| | Before program | | After program | |
|---|---|---|---|---|
| **Services delivered** | **Frequency** | **Percentage** | **Frequency** | **Percentage** |
| Wellness care/health promotion | 13 | 86.7 | 14 | 93.3 |
| Care of minor acute illness | 12 | 80.0 | 14 | 93.3 |
| Monitoring of chronic illness | 13 | 86.7 | 13 | 86.7 |
| Care of major acute illness | 6 | 40.0 | 7 | 46.7 |
| Care of palliative patients | 8 | 53.3 | 4 | 26.7 |
| Home visits to housebound patients | 7 | 46.7 | 4 | 26.7 |
| Night and weekend on-call coverage | 2 | 13.3 | 1 | 6.7 |
| Linkages to community organizations | 9 | 60.0 | 9 | 60.0 |
| Psychosocial support and counselling | 10 | 66.7 | 11 | 73.3 |

| Other-long term care facility | 1 | 6.7 | | |
|---|---|---|---|---|

Like the NP surveys, the FPs also indicated that the majority of NP service delivery focused on wellness care/health promotion and in the care of minor acute illness (93% each). The FPs' also indicated that NPs spent 87% of the time dealing with chronic illness monitoring.

Paired sample t-tests were performed to examine whether the FPs reported differences in service delivery before and after the program. The t-tests did not indicate significant changes in the FPs' perception of NP service activity in any of the categories. The greatest change according to the FPs was in the care of palliative patients, where they reported that after the program, NPs were less involved in palliative care.

*Patient Statistics*

Another indicator of functioning with the NP's scope of practice is the total number of patients seen by the NP, the percentage of patients the NP perceives views him/her as their primary provider and the number of hours on call (see Table 22).

**Table 22. Patient statistics based on NP reports before and after program**

| | Before intervention | | | After intervention | | |
|---|---|---|---|---|---|---|
| | **N** | **Mean** | ***SD*** | **N** | **Mean** | ***SD*** |
| Average number of patients seen per day | 36 | 13.14 | 6.796 | 36 | 17.03 | 15.093 |
| Percentage of patients for whom the NP is the primary care provider | 36 | 37.64 | 38.461 | 34 | 54.62 | 40.233 |
| Average number of hours per month on call | 35 | 3.09 | 14.652 | 33 | 1.91 | .292 |

Based on the statistics reported by the NPs before and after the program, the percentage of patients for whom the NP was considered their primary provider increased significantly, from 38 to 55 %, $t(1,33) = -2.0$, $p < .05$. The average number of patients seen per day

and the average number of on call hours was not significantly different. To examine this increase in patients considering the NP the primary care provider, Table 23 lists the method of patient referral both before and after the program.

**Table 23. Method of patient referral according to NPs before and after program**

| | Before program | | After program | |
|---|---|---|---|---|
| | N | % | N | % |
| Patients book appointments | 36 | 88.9 | 36 | 88.9 |
| Patients are referred from another setting | 36 | 38.9 | 36 | 58.3 |
| Patients are referred from a colleague | 35 | 72.2 | 36 | 77.8 |
| Patients referred in other method | 35 | 22.2 | 36 | 19.4 |
| Patients referred from physician out in community | 35 | 27.8 | 36 | 47.2 |
| Receptionist assigns patients | 35 | 55.6 | 36 | 30.6 |
| Patients assigned via triage | 35 | 33.3 | 36 | 30.6 |

Of the methods of referral seen in Table 23, patients referred from another setting increased over the year and bordered on significance, $t(2,35) = -2.02$, $p = .051$. A drop in the receptionist assigning patients was found following the program; however, this was not statistically significant. NPs were asked if they receive referrals from physicians. Sixty-nine percent indicated they did before the program whereas 83% indicated they did following the program, however, a chi-square analysis of pre-post program referral patterns from physicians was not significant.

*Satisfaction*

NP job satisfaction. Another important outcome measure relates to job satisfaction. Specifically, has the program improved the NPs' level of job satisfaction and the FPs satisfaction with the NP role? To address this question, Misener's Nurse Practitioner Job

Satisfaction Scale (see Role Survey, Appendix A) was given to the NPs both before and after the program. This scale requires the NP to rate their level of satisfaction (6 = very satisfied to 1 = very dissatisfied) on 42 items. The items can then be collapsed into the following categories: intra-practice partnership/collegiality, challenge/autonomy, professional, social and community linkages, professional growth, time and benefits. Table 24 describes the NP responses before and after the program for these categories.

**Table 24. NPs response to Misener's Nurse Practitioner Job Satisfaction Scale before and after the program**

| Factor | Mean | *SD* |
| --- | --- | --- |
| **Intra-practice partnership** | | |
| Pre | 4.7 | .63 |
| Post | 4.3 | 1.1 |
| **Challenge/autonomy** | | |
| Pre | 4.5 | .54 |
| Post | 4.3 | .66 |
| **Professional/social/community linkages** | | |
| Pre | 4.1 | .63 |
| Post | 3.8 | .79 |
| **Professional growth** | | |
| Pre | 4.4 | .94 |
| Post | 4.2 | 1.16 |
| **Time** | | |
| Pre | 4.7 | .77 |
| Post | 4.6 | .77 |
| **Benefits** | | |
| Pre | 4.4 | .87 |
| Post | 4.6 | .87 |

Note: 6 = very satisfied to 1 = very dissatisfied

As shown in Table 24, most of the responses ranged from "minimally satisfied" to "satisfied". After the program, all of the categories except "benefits" indicated lower

satisfaction levels than before program scores. However, paired samples t-tests did not show significant differences in NPs' job satisfaction for any of the categories based on Misener's Nurse Practitioner Job Satisfaction Scale.

FP satisfaction with the role of the NP. The FPs were asked to indicate their level of satisfaction with the NP role on a four point Likert scale, where 1 = very dissatisfied, 2 = somewhat dissatisfied, 3 = somewhat satisfied and 4 = very satisfied. Table 25 describes the FP responses to these variables both before and after the program.

**Table 25. FPs satisfaction with the role of the nurse practitioner before and after the program**

| | Time | N | Mean | *SD* |
|---|---|---|---|---|
| Quality of care provided by NP | Pre | 13 | 3.62 | .650 |
| | Post | 13 | 3.92 | .277 |
| Length of time NP spends with patients | Pre | 13 | 3.31 | .751 |
| | Post | 13 | 3.46 | .660 |
| Consultation with physician when appropriate | Pre | 13 | 3.46 | .519 |
| | Post | 13 | 3.54 | .519 |
| Physician ability to access the services of the NP | Pre | 12 | 3.58 | .669 |
| | Post | 12 | 3.42 | .669 |
| Length of time NP spends completing documentation | Pre | 12 | 3.17 | .389 |
| | Post | 12 | 3.33 | .985 |
| The amount of physician | Pre | 13 | 2.92 | .641 |

| | | | | |
|---|---|---|---|---|
| time required to support the NP | Post | 13 | 3.15 | .689 |

Note: 1 = very dissatisfied to 4 = very satisfied

As indicated on the above table, "quality of care provided by the NP" almost reached "very satisfied". The remaining factors ranged between "somewhat satisfied" to "very satisfied" with the exception of the amount of time required to support the NP.

Regarding a change in FP satisfaction levels following the program, Table 25 shows that all scores except "physician ability to access the services of the NP" increased in satisfaction level. However, paired t-tests did not show significant differences for any of the variables across time.

*Benefits of working with the NP*

To explain FPs' satisfaction levels, they were asked to indicate the benefits of working with the NP on a 4 point Likert scale, where 1 = strongly agree, 2 = somewhat agree, 3 = somewhat disagree and 4 = strongly disagree. Table 26 provides the descriptive statistics before and after the program.

**Table 26. Benefits to working with the NP before and after the program**

| Benefits | Time | N | Mean | STD |
|---|---|---|---|---|
| Reduces physician workload | Pre | 15 | 2.13 | 1.125 |
| | Post | 15 | 2.27 | .884 |
| Allows physician to focus their skills in care of more acute/complex patient problems | Pre | 15 | 1.80 | .862 |
| | Post | 15 | 1.93 | 1.033 |
| Allows practice setting to increase their patient population | Pre | 15 | 2.20 | .941 |
| | Post | 15 | 1.27 | .458 |

| Benefits | Time | N | Mean | STD |
| --- | --- | --- | --- | --- |
| NP can focus time and expertise on specific patient populations | Pre | 15 | 1.73 | .594 |
| | Post | 15 | 1.73 | 1.033 |
| NP can focus time and expertise on patient education about health problem prevention | Pre | 13 | 1.54 | .660 |
| | Post | 13 | 1.38 | .650 |
| NP can focus time and expertise on community education about health promotion | Pre | 14 | 1.71 | .611 |
| | Post | 14 | 1.79 | .975 |
| NP can apply knowledge and expertise in linking patients with community resources | Pre | 13 | 1.69 | .630 |
| | Post | 13 | 1.85 | .801 |

Note: 1 = strongly agree to 4 = strongly disagree

Overall, the FPs reported positive benefits to working with the NP. FPs indicated strong agreement with six factors including: applying knowledge and expertise in linking patients with community resources; focusing time and expertise on community education about health promotion; allows physicians to focus their skills in the care of more acute or complex patient problems; allows patients increased access to services; NPs can focus time and expertise on specific patient populations; and, NPs can focus time and expertise on patient education about health problem prevention and treatment. In addition, FPs "somewhat agreed" that NPs reduced their workload. The only factor which changed categories before and after the program was "allows the practice setting to increase their patient population" moving from "somewhat agree" to "strongly agree". However, this comparison was not statistically significant, $t(1,14) = 1.78$, $p = .09$.

**Collaborative practice and role clarification**

*Collaboration*

The final outcome measure examined collaborative practice and the FPs' perception of role appropriateness for NPs. The first part of the Collaborative Practice Questionnaire (Jones and Way, see Appendix A) examined current collaboration efforts measured on a 7 point Likert scale where 1 = strongly agree, 2 = agree, 3 = somewhat agree, 4 = neutral, 5 = somewhat disagree, 6 = disagree, and 7 = strongly disagree. Table 27 presents the results of the NP and FP responses before and after the program.

**Table 27. NP and FP measure of current collaboration – Jones Way Collaborative Practice Questionnaire before and after the program**

| Factor | | | Before Program | | After Program | |
|---|---|---|---|---|---|---|
| | | N | Mean | *SD* | Mean | *SD* |
| Plan together to make decisions about the care of patients | **NP** | 24 | 2.17 | 1.37 | 1.87 | 1.29 |
| | **FP** | 14 | 2.14 | 1.29 | 2.57 | 1.74 |
| | **Total** | 38 | 2.16 | 1.32 | 2.14 | 1.49 |
| Share responsibility for decisions made about patient care | **NP** | 24 | 1.96 | 1.19 | 1.61 | .891 |
| | **FP** | 14 | 2.57 | 1.39 | 2.36 | 1.73 |
| | **Total** | 38 | 2.18 | 1.29 | 1.89 | 1.30 |
| Communicate openly as decisions are made about patient care | **NP** | 24 | 1.92 | 1.28 | 1.78 | 1.16 |
| | **FP** | 14 | 2.07 | 1.26 | 2.43 | 1.74 |
| | **Total** | 38 | 1.97 | 1.26 | 2.03 | 1.42 |
| Cooperate in making decisions about patient care | **NP** | 24 | 1.88 | 1.22 | 1.70 | .97 |
| | **FP** | 14 | 2.21 | 1.31 | 2.29 | 1.72 |

| Factor | | | Before Program | | After Program | |
|---|---|---|---|---|---|---|
| | **Total** | 38 | 2.00 | 1.25 | 1.92 | 1.32 |
| Consider both nursing and medical concerns in making decisions about patient care | **NP** | 24 | 2.33 | 1.49 | 1.91 | 1.24 |
| | **FP** | 14 | 2.79 | 1.31 | 2.29 | 1.38 |
| | **Total** | 38 | 2.50 | 1.42 | 2.05 | 1.29 |
| Co-ordinate implementation of a shared plan for patient care | **NP** | 24 | 2.58 | 1.53 | 1.87 | 1.01 |
| | **FP** | 14 | 2.86 | 1.40 | 2.36 | 1.64 |
| | **Total** | 38 | 2.68 | 1.47 | 2.05 | 1.29 |
| Demonstrate trust in the other's decision making ability in making shared decisions about patient care | **NP** | 24 | 1.96 | 1.33 | 1.78 | 1.27 |
| | **FP** | 14 | 1.79 | .80 | 1.64 | .92 |
| | **Total** | 38 | 1.89 | 1.15 | 1.73 | 1.14 |
| Respect the other's knowledge and skills in making shared decisions about patient care | **NP** | 24 | 2.00 | 1.35 | 1.96 | 1.58 |
| | **FP** | 14 | 1.93 | 1.07 | 1.57 | 1.08 |
| | **Total** | 38 | 1.97 | 1.24 | 1.81 | 1.41 |
| Fully collaborate in making shared decisions about patient care | **NP** | 24 | 2.25 | 1.32 | 2.00 | 1.38 |
| | **FP** | 14 | 2.86 | 1.56 | 2.43 | 1.78 |
| | **Total** | 38 | 2.47 | 1.42 | 2.16 | 1.53 |

Note: 1 = strongly agree to 7 = strongly disagree

As Table 27 indicates, all responses for both NPs and FPs fell within the "agree" to "strongly agree" categories. Overall, the NPs tended to more strongly agree with the statements about current collaboration. As well, following the program, the NPs reported higher

agreement for all nine statements. The FPs also responded with higher agreement following the program for six of the nine statements, excluding: cooperate in making decisions about patient care (slightly less agreement); plan together to make decisions about the care of patients; and, communicate openly as decisions are made about patient care. However, a 2 (NP, FP) x 2 (before, after) analysis of variance did not show significant differences either between NPs and FPs or for the groups before and after the program.

*Satisfaction with collaboration.* The second part of the Collaborative Practice Questionnaire (Jones Way Satisfaction with Collaboration Scale) examined the level of satisfaction associated with shared planning, open communication, shared responsibility, cooperation, consideration of both nursing and medical concerns, shared planning, respect and trust for one another's knowledge and skills, collaboration in making decisions, the decision-making process and collaboration about decisions regarding patient care. As with the other scale, NPs and FPs were asked to rate their current level of satisfaction for these factors on a 7 point Likert scale where 1 = strongly satisfied, 2 = satisfied, 3 = somewhat satisfied, 4 = neutral, 5 = somewhat dissatisfied, 6 = dissatisfied and 7 = very dissatisfied. Table 28 provides the means and standard deviations for both NPs and FPs level of satisfaction both before and after the program.

**Table 28. NP and FP measure of satisfaction with current degree of collaboration (Jones Way Collaborative Practice Questionnaire) before and after the program**

| Factor | | | Before Program | | After Program | |
|---|---|---|---|---|---|---|
| | | N | Mean | *SD* | Mean | *SD* |
| The open communication between you and the NP or FP that takes place as decisions are made about patient care | NP | 24 | 1.92 | 1.24 | 1.83 | 1.09 |
| | FP | 14 | 2.07 | 1.14 | 1.79 | .97 |
| | Total | 38 | 1.97 | 1.19 | 1.82 | 1.03 |
| The shared responsibility for decisions made between you and the NP | | | | | | |

| Factor | | | Before Program | | After Program | |
|---|---|---|---|---|---|---|
| or FP about patient care | NP | 24 | 2.13 | 1.19 | 1.92 | 1.21 |
| | FP | 14 | 2.50 | 1.16 | 2.14 | 1.02 |
| | Total | 38 | 2.26 | 1.178 | 2.00 | 1.139 |
| The cooperation between you and the NP or FP in making decisions about patient care | NP | 24 | 2.00 | 1.21 | 2.00 | 1.47 |
| | FP | 14 | 2.36 | 1.33 | 1.79 | 1.12 |
| | Total | 38 | 2.13 | 1.25 | 1.92 | 1.34 |
| The consideration of both nursing and medical concerns as decisions are made about patient care | NP | 24 | 2.38 | 1.61 | 2.04 | 1.19 |
| | FP | 14 | 2.93 | 1.32 | 2.21 | .97 |
| | Total | 38 | 2.58 | 1.51 | 2.11 | 1.11 |
| The coordination between you and the NP or FP when implementing a shared plan for patient care | NP | 24 | 2.58 | 1.41 | 2.08 | 1.24 |
| | FP | 14 | 2.57 | 1.55 | 2.36 | 1.59 |
| | Total | 38 | 2.58 | 1.44 | 2.18 | 1.37 |
| The trust shown by you and the NP or FP in one another's decision making ability in making shared decisions about patient care | NP | 24 | 2.13 | 1.48 | 1.88 | 1.39 |
| | FP | 14 | 1.93 | .99 | 1.71 | 1.13 |
| | Total | 38 | 2.05 | 1.31 | 1.82 | 1.29 |
| The respect shown by you | | | | | | |

| Factor | | | Before Program | | After Program | |
|---|---|---|---|---|---|---|
| and the NP or FP in one another's knowledge and skills | NP | 24 | 2.08 | 1.44 | 1.75 | 1.35 |
| | FP | 14 | 1.79 | .89 | 1.50 | .85 |
| | Total | 38 | 1.97 | 1.26 | 1.66 | 1.19 |
| The amount of collaboration between you and the NP or FP that occurs in making decisions about patient care | NP | 24 | 2.38 | 1.66 | 1.92 | 1.01 |
| | FP | 14 | 2.64 | 1.55 | 2.14 | 1.29 |
| | Total | 38 | 2.47 | 1.60 | 2.00 | 1.11 |
| The way that decisions are made between you and the NP or FP about patient care (with the decision making process) | NP | 24 | 2.29 | 1.33 | 1.88 | 1.03 |
| | FP | 14 | 2.79 | 1.47 | 2.36 | 1.49 |
| | Total | 38 | 2.47 | 1.39 | 2.05 | 1.22 |
| The decisions that are made between you and the NP or FP about patient care | NP | 24 | 2.04 | 1.26 | 1.79 | .93 |
| | FP | 14 | 2.29 | 1.54 | 1.86 | .86 |
| | Total | 38 | 2.13 | 1.35 | 1.82 | .89 |

Note: 1 = strongly satisfied to 7 = strongly dissatisfied

Similar to the previous collaboration scale results, all of the responses both before and after the program ranged in the high end of the scale (i.e., "satisfied" to "highly satisfied"). However, unlike the previous scale, there were mixed responses between the NPs and FPs. Following the program, the NPs reported higher satisfaction compared to the FPs for shared responsibility, consideration of both nursing and medical concerns, shared planning, the

amount of collaboration, and the decision-making process regarding patient care. FPs on the other hand, reported higher levels of satisfaction for the level of open communication, cooperation, and respect and trust for one another's knowledge and skills.  As Table 28 also shows, all responses for both NPs and FPs reported equal or greater satisfaction following the program. However, a 2 (NP, FP) x 2 (before, after program) analysis of variance did not indicate significant differences between the NPs and FPs or across time.

*FPs' perception of role appropriateness for NPs*.

The FPs were presented with a series of vignettes and asked to rate their belief regarding the degree of appropriateness or inappropriateness for the NP to see the patients described for assessment and decision-making. The scale had the following descriptors: 0 = highly inappropriate, 1 = very inappropriate, 2 = inappropriate, 3 = somewhat inappropriate, 4 = neutral, 5 = somewhat appropriate, 6 = appropriate, 7 = very appropriate, and 8 = highly appropriate. Table 29 presents the FP responses to these vignettes both before and after the program.

**Table 29.  Changes in FP responses to role appropriate vignettes before and after the program**

| Vignette | | Mean | *SD* | *SD* Error Mean |
|---|---|---|---|---|
| **1.** A chronic alcoholic who is well known at your clinic presents with the chief complaint of "I want to stop drinking". Liver function tests including protime are within normal limits. | **Pre** | 6.42 | 1.443 | .417 |
| | **Post** | 6.33 | 1.231 | .355 |
| **2.** A sexually active 20 year old female complains of suprapubic tenderness and dysuria. She has been treated at least four times in the past for UTI. | **Pre** | 6.73 | 1.679 | .506 |
| | **Post** | 6.55 | 1.128 | .340 |
| **3.** A 16-year-old male presents to the clinic with a 2 | **Pre** | 7.42 | .793 | .229 |

| Vignette | | Mean | *SD* | *SD* Error Mean |
|---|---|---|---|---|
| day history of score throat, high fever, and tender nodes. His sister has had recurrent Strep pharyngitis. | **Post** | 7.25 | .965 | .279 |
| **4**. Patient B is a 24-year-old male with a long history of abdominal pain. Numerous UGI and BE exams have been normal. He smokes heavily and probably does not take antacids as prescribed. | **Pre** | 5.25 | 2.050 | .592 |
| | **Post** | 5.33 | 1.775 | .512 |
| **5**. A 46-year-old female was recently hospitalized for minor surgery. While in the hospital, she was told she had high blood pressure and was begun on a diuretic. She comes to the clinic because she has no regular doctor. Her blood pressure is 140 / 80. | **Pre** | 6.67 | .651 | .188 |
| | **Post** | 6.33 | 1.073 | .310 |
| **6**. An 87-year-old female has been bedridden for 2 weeks with influenza. Today she noted the acute onset of chest pain and shortness of breath. | **Pre** | 1.92 | 1.443 | .417 |
| | **Post** | 2.17 | 1.801 | .520 |
| **7**. A 15-year-old male is concerned because he has had homosexual urges and one homosexual encounter. | **Pre** | 6.00 | 1.537 | .444 |
| | **Post** | 6.00 | 1.595 | .461 |
| **8**. A 57-year-old male is | | | | |

| Vignette | | Mean | *SD* | *SD* Error Mean |
|---|---|---|---|---|
| concerned about the recent onset of chest pain. He has been in excellent health except for mild Type 2 diabetes controlled by diet. | **Pre** | 2.58 | 2.392 | .690 |
| | **Post** | 2.92 | 1.443 | .417 |
| **9**. A 38-year-old male has just been discharged from the hospital following an acute myocardial infarction. There is no evidence of heart failure or angina. He smokes and is overweight. He comes to you for information. | **Pre** | 5.58 | 2.353 | .679 |
| | **Post** | 6.25 | 1.603 | .463 |

Note: Ratings 8 = highly appropriate to 0 = highly inappropriate, N = 12 for all vignettes

Based on the research identified by Davidson and Lauver[3], it was expected that FPs would rate vignettes 1, 5, and 9 as highly appropriate for NPs based on their increased level of education and the supportive role of nursing associated with the NP scope of practice. Alternately, vignettes 2, 6, and 8 should be rated as inappropriate to highly inappropriate. Vignettes 3, 4, and 7 are situations appropriate for both NPs and FPs and reflect the FPs' understanding of the NP role in acute care and chronic care management. These scores are expected to fall within the high to highly appropriate end of the scale.

The results indicate that the FPs' post responses regarding their understanding of the NP role does not strictly correspond to previous research. Vignette 2 was rated more highly and vignette 4 was rated lower than expected. These differences may be a reflection of changes in medical knowledge and best practices that have occurred in the twenty years since the original research was conducted.

**Barriers and facilitators to NP role fulfilment from the perspective of NPs and FPs**

*NP description of facilitators that support their ability to fulfill their NP role*

Descriptive statistics for facilitators identified by NPs for their practice setting for both pre and post surveys are found in Table 30. Note that the NPs were able to identify as many facilitators as they wished.

**Table 30. NP reports of facilitators to collaboration before and after the program**

| Facilitator | Before Program | | After program | | Change In Frequency |
|---|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage | Post-Pre |
| Degree of acceptance of role from patients | 26 | 72.2 | 31 | 86.1 | 5 |
| Degree of acceptance of my role from physician I work with | 20 | 55.6 | 24 | 66.7 | 4 |
| My work experience prior to entering the NP program | 20 | 55.6 | 30 | 83.3 | 10 |
| The nature of my employment relationship | 20 | 55.6 | 24 | 66.7 | 4 |
| Personality and philosophy of physician | 19 | 52.8 | 23 | 63.9 | 4 |
| Level of my own confidence | 19 | 52.8 | 29 | 83.1 | 10 |
| Working relationship with other providers | 19 | 52.8 | 24 | 66.7 | 5 |
| Degree of acceptance of my role from the health care providers (HCPs) in the practice | 17 | 47.2 | 19 | 52.8 | 2 |
| Degree of acceptance of my role from the | 17 | 47.2 | 25 | 69.4 | 8 |

| Facilitator | | Before Program | | After program | | Change In Frequency |
|---|---|---|---|---|---|---|
| | community | | | | | |
| | Practice model in which I operate | 16 | 44.4 | 23 | 63.9 | 7 |
| | My education preparation through the NP program | 16 | 44.4 | 22 | 61.1 | 6 |
| | Available physical space to work | 14 | 38.9 | 15 | 41.7 | 1 |
| | NP funding- multiple strategies | 12 | 33.3 | 15 | 41.7 | 3 |
| | Degree of acceptance of my role from HCP outside my practice | 12 | 33.3 | 19 | 52.8 | 5 |
| | Orientation of the health care team to my role | 10 | 27.8 | 20 | 55.6 | 10 |
| | Number of patients that I see in my practice | 10 | 27.8 | 19 | 52.8 | 9 |
| | Available administrative support/medical supplies | 10 | 27.8 | 3 | 8.3 | -7 |
| | Way my role has been defined- too broad | 8 | 22.2 | 11 | 30.6 | 3 |
| | Way my role has been defined- too narrow | 5 | 13.9 | 11 | 30.6 | 6 |
| | Funding for NP related activities | 4 | 11 | 5 | 13.9 | 1 |

| Facilitator | Before Program | | After program | | Change In Frequency |
|---|---|---|---|---|---|
| Isolation in practice | 3 | 8.3 | 6 | 16.7 | 3 |
| Health care financing | 3 | 8.3 | 6 | 16.7 | 3 |
| Legislation such as drug and laboratory lists | 2 | 5.6 | 8 | 22.2 | 6 |
| OHIP policies | 1 | 2.8 | 4 | 11.1 | 3 |
| Legislation such as Public Hospitals Act | 0 | 0 | 3 | 8.3 | 3 |

Based on the results identified in Table 30, the NPs rated the "degree of acceptance of their role from patients" as the most important facilitator to their practice before the program. The majority of NPs also rated the following factors as facilitators for their practice: degree of acceptance of my role from the physician I work with; the nature of my employment relationship; my work experience prior to entering the NP program; level of my own confidence; personality and philosophy of physician; and working relationship with other providers.

Following the program, once again, the highest rated facilitator according to the NPs was "degree of acceptance of their role from patients". However, following the program, far more factors were identified as facilitators by a majority of NPs than before the program (14 factors vs. 7). Work experience prior to entering the NP program and level of confidence were both highly rated facilitators to their practice (83%) after the program. Additional facilitators identified by the majority of NPs after the program included: degree of acceptance of my role from other health care providers in and out of the practice; practice model in which I operate; orientation of the health care team to my role; personality and philosophy of physician; my education preparation through the NP program; number of patients seen; and degree of acceptance of my role from the community. Thus, most of the facilitators identified by the NPs related to relational issues, their sense of preparedness to their role and their acceptance within their practice and community.

Although the data was not organized to compare the number of reported facilitators before and after the program, a cursory examination of change in frequency scores (number of responses post program minus pre program) as seen in Table 30, shows that the top three facilitators that increased the most were: my work experience; level of my confidence; and, orientation of the health care team to my role.

As well as facilitators, NPs were asked to identify barriers to their practice (see Table 31).

**Table 31. NP reports of barriers to collaboration before and after the program**

| **Barriers** | **Before Program** | | **After program** | | **Change In Frequency** |
|---|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage | Post-Pre |
| Legislation such as drug and laboratory lists | 26 | 72.2 | 28 | 77.8 | 2 |
| Legislation such as Public Hospitals Act | 20 | 55.6 | 28 | 77.8 | 8 |
| OHIP policies | 18 | 50.0 | 22 | 61.1 | 4 |
| Isolation in practice | 17 | 47.2 | 22 | 61.1 | 5 |
| Available administrative support/medical supplies | 14 | 38.9 | 26 | 72.2 | 12 |
| Health care financing | 14 | 38.9 | 23 | 63.9 | 9 |
| Funding for NP related activities | 11 | 30.6 | 24 | 66.7 | 13 |
| Orientation of the health care team to my role | 11 | 30.6 | 11 | 30.6 | 0 |
| Degree of acceptance of my role from HCP outside my practice | 10 | 27.8 | 8 | 16.7 | -2 |
| Number of patients that I | 10 | 27.8 | 8 | 22.2 | -2 |

| Barriers | Before Program | | After program | | Change In Frequency |
|---|---|---|---|---|---|
| see in my practice | | | | | |
| Available physical space to work | 10 | 27.8 | 10 | 27.8 | 0 |
| My education preparation through the NP program | 8 | 22.2 | 6 | 16.7 | -2 |
| Level of my own confidence | 8 | 22.2 | 4 | 11.1 | -4 |
| Practice model in which I operate | 6 | 16.7 | 9 | 25.0 | 3 |
| Personality and philosophy of physician | 6 | 16.7 | 7 | 19.4 | 1 |
| My work experience prior to entering the NP program | 5 | 13.9 | 2 | 5.6 | -3 |
| Degree of acceptance of my role from the community | 5 | 13.9 | 7 | 19.4 | 2 |
| Way my role has been defined- too narrow | 5 | 11.1 | 8 | 19.4 | 3 |
| Way my role has been defined- too broad | 4 | 11.1 | 8 | 22.2 | 4 |
| Degree of acceptance of my role from physician I work with | 4 | 11.1 | 6 | 22.2 | 2 |
| Degree of acceptance of my role from the HCPs in practice | 4 | 8.3 | 0 | 16.7 | -4 |
| Degree of acceptance of role from patients | 3 | 5.6 | 4 | 0 | 1 |

| Barriers | Before Program | | After program | | Change In Frequency |
|---|---|---|---|---|---|
| The nature of my employment relationship | 2 | 5.6 | 4 | 11.1 | 2 |
| Working relationship with other providers | 2 | 5.6 | 4 | 11.1 | 2 |

While the facilitators to practice as defined by the NPs centered on relational issues, the identified barriers focused on legislative and regulatory issues such as The Public Hospitals Act and drug and laboratory lists for NPs as well as provincial health policies. Following the program, more factors were identified as barriers than before the program (7 vs 3). Policy issues related to funding (health care financing, funding for NP related activities and available administrative support) and isolation in practice were added to the legislative and regulatory barriers.

The top three barriers that changed the most pre and post program included: funding for NP related activities; available administrative support/medical supplies; and health care financing.

FPs were also asked to identify facilitators (see Table 32) and barriers (see Table 33) to the effective integration of the NP role.

**Table 32. FP reports of facilitators to NP role integration before and after the program**

| Facilitators | Before Program | | After program | | Change in Frequency |
|---|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage | Post-Pre |
| How the working relationship between NP and FP is structured | 14 | 93.3 | 14 | 93.3 | 0 |
| Acceptance of the NP | 13 | 86.7 | 13 | 86.7 | 0 |

| Facilitators | Before Program | | After program | | Change in Frequency |
|---|---|---|---|---|---|
| role by patients | | | | | |
| Co-workers understanding of the NP role | 13 | 86.7 | 12 | 80.0 | -1 |
| NP knowledge and skill to work within full scope of practice | 13 | 86.7 | 12 | 80.0 | -1 |
| How long the FP and NP have been working together | 12 | 80.0 | 13 | 86.7 | 1 |
| The nature of the NP employment relationship | 12 | 80.0 | 12 | 80.0 | 0 |
| Confidence of the NP | 12 | 80.0 | 12 | 80.0 | 0 |
| Co-workers acceptance of the NP role | 11 | 73.3 | 13 | 86.7 | 2 |
| Legislation that allows prescribing and ordering tests | 11 | 73.3 | 9 | 60.0 | -2 |
| Expertise of the NP | 10 | 66.7 | 13 | 86.7 | 3 |
| Acceptance of the NP role by the community | 9 | 60.0 | 10 | 66.7 | 1 |
| Practice style of the NP | 9 | 60.0 | 11 | 73.3 | 2 |
| NP prior RN experience | 9 | 60.0 | 10 | 66.7 | 1 |
| Acceptance of the NP role by the HCPs outside of the practice | 8 | 53.3 | 10 | 66.7 | 2 |

| Facilitators | Before Program | | After program | | Change in Frequency |
|---|---|---|---|---|---|
| NP knowledge and skill to work beyond full scope of practice | 7 | 46.7 | 7 | 46.7 | 0 |

The FPs focused on working conditions and NP competency as the most important facilitators to the integration of the NP role. Both before and after the program, the majority of identified facilitators included: how the working relationship between NP and FP was structured; acceptance of the NP role by patients; co-workers understanding of the NP role; NP knowledge and skill to work within their full scope of practice; how long the FP and NP have been working together; the nature of the NP employment relationship; co-workers acceptance of the NP role; expertise of the NP; co-workers acceptance of the NP role; confidence of the NP; acceptance of the NP role by the community; practice style of the NP; NP prior RN experience; acceptance of the NP role by health care providers (HCP) outside of the practice; and, legislation that allows prescribing and ordering tests.

Thus, the facilitators identified by the FPs included working conditions and knowledge and expertise of the NP as important. Examination of the change scores did not indicate large differences in the FP reports of facilitators before and after the program.

Table 33 presents the FP reports of barriers to the integration of the NP role before and after the program

**Table 33. FP reports of barriers to the integration of the NP role before and after the program**

| Barriers | Before Program | | After program | | Change In Frequency |
|---|---|---|---|---|---|
| | Frequency | Percentage | Frequency | Percentage | Post-Pre |
| How the working relationship between NP and FP is | 12 | 80.0 | 8 | 53.3 | -4 |

| Barriers | Before Program | | After program | | Change In Frequency |
|---|---|---|---|---|---|
| structured | | | | | |
| The nature of the NP employment relationship | 11 | 73.3 | 9 | 60.0 | -2 |
| Co-workers lack of understanding of the NP role | 10 | 66.7 | 7 | 46.7 | -3 |
| NP lack of experience | 9 | 60.0 | 7 | 46.7 | -2 |
| Level of acceptance of the NP role by the health care providers outside of the practice | 9 | 60.0 | 8 | 53.3 | -1 |
| Practice style of the NP | 8 | 53.3 | 5 | 33.3 | -3 |
| Co-workers lack of acceptance of the NP role | 8 | 53.3 | 9 | 60.0 | 1 |
| Medical-legal concerns related to responsibility for shared care | 8 | 53.3 | 6 | 40.0 | -2 |
| Resistance to the NP role by patients | 7 | 46.7 | 8 | 53.3 | -1 |
| Resistance to the NP role by the community | 6 | 40.0 | 3 | 20.0 | -3 |
| NP consultation | 7 | 46.7 | 5 | 33.3 | -2 |

| Barriers | Before Program | | After program | | Change In Frequency |
|---|---|---|---|---|---|
| practice: consults with FP too often | | | | | |
| NP lack of confidence | 7 | 46.7 | 7 | 46.7 | 0 |
| NP lack of knowledge and skill to work within full scope of practice | 7 | 46.7 | 8 | 53.3 | 1 |
| Government programs and 3rd party payer policies that do not recognize NP practice | 6 | 40.0 | 8 | 53.3 | 2 |
| NP consultation practice: consults with FP not often enough | 6 | 40.0 | 6 | 40.0 | 0 |
| Regulated drug and laboratory lists | 5 | 33.3 | 9 | 60.0 | 4 |
| Inadequate funding for NP related expenses | 5 | 33.3 | 7 | 46.7 | 2 |
| NP working beyond full scope of practice | 4 | 26.7 | 4 | 26.7 | 0 |
| Lack of physical space for NP | 3 | 20.0 | 6 | 40.0 | 3 |

Before the program, the barriers identified by the FPs focused on the NP/FP working situation. Specifically, FPs identified: how the working relationship is structured; the nature of the NP employment relationship; co-workers lack of understanding of the NP role; NP lack of experience; level of acceptance of NP by health care providers outside the practice;

practice style of the NP; and, co-workers lack of acceptance of the NP role. Following the program, regulated drug and laboratory lists; government programs and 3rd party payer policies that do not recognize NP practice; NP lack of skill to work within their full scope of practice; co-workers lack of acceptance of NP role; resistance to the NP role by patients; the nature of the NP employment relationship; how the working relationship is structured; and, level of acceptance of NP by health care providers outside the practice were the barriers most often reported.

Barriers that were reported before the program that were not identified by the majority of FPs after the program included: co-workers lack of understanding of the NP role; NP lack of experience; practice style of the NP; and, co-workers lack of acceptance of the NP role. However, the change scores did not show large discrepancies from before and after the program. The greatest changes were an increase the number of FPs who identified the regulated drug and laboratory lists as a barrier and a decrease in the number of FPs who identified how the working relationship between NP and FP is structured as a barrier.

**Personal and contextual variables associated with collaboration**

To address whether NP and FP perception of collaboration was influenced by contextual or personal variables, an examination of NP functioning with their full scope of practice, role clarity, degree of collaboration, and satisfaction was performed for the following domains: type of practice, type of service provided, population served, FP characteristics (e.g., age, gender), workplace satisfaction factors (e.g., type of employment, salary, opportunities for continuing education, etc.), and serving as primary service provider. Categorical data were examined using a series of chi square goodness of fit analyses and continuous data was examined using correlations. All of the following results used post program data.

*Personal factors and collaboration*

NP functioning within their scope of practice. For the NPs, functioning within their scope of practice was examined for: type of practice, whether their role was clearly defined, whether they specialize or care for specific populations, where the FP they work with is located and whether they had previous NP/FP collaborations.

The first examination looked at type of practice compared to whether the NP felt they were able to function within their full scope of practice based on the post program results. Table 34 displays the frequency counts for the different practice types.

**Table 34. NP functioning within their full scope of practice by practice setting-post program**

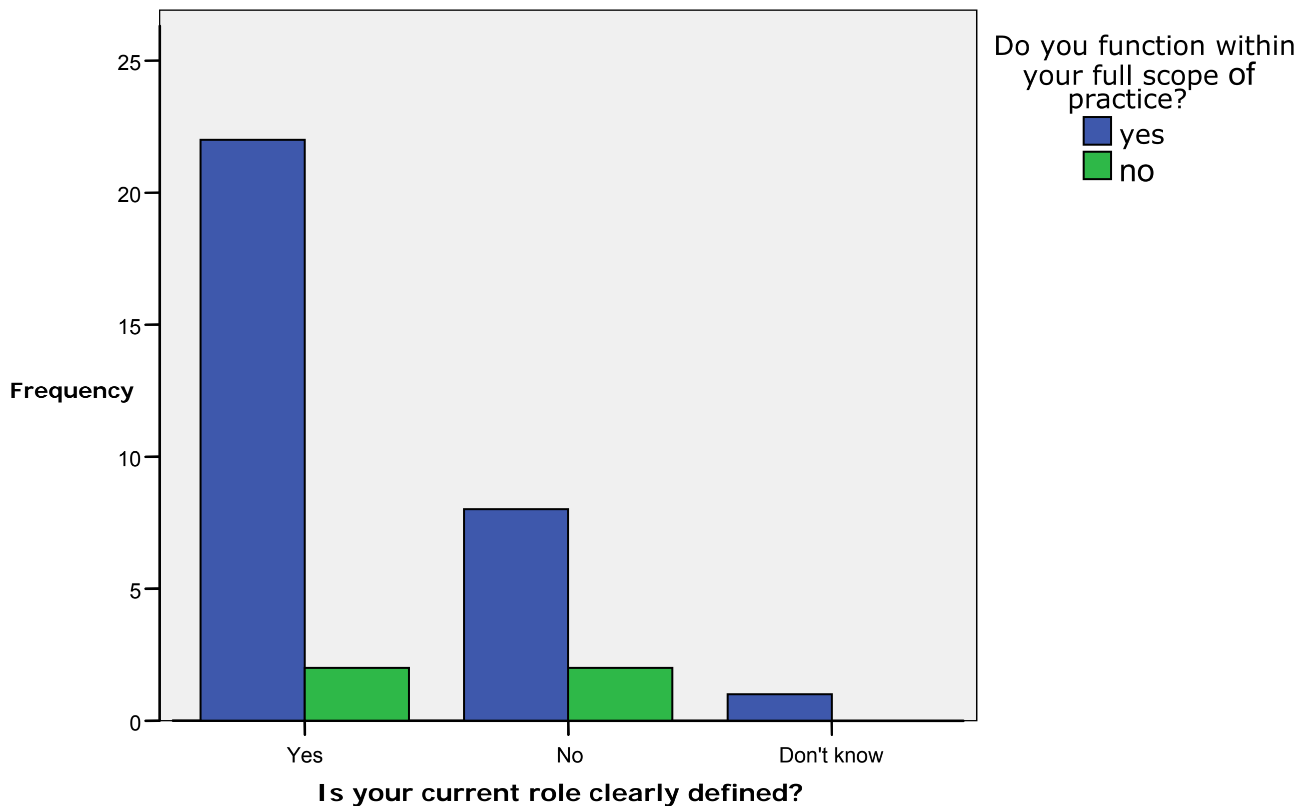
| | Do you function within your full scope of practice? | | Total |
|---|---|---|---|
| **Practice setting** | **Yes** | **No** | |
| Aboriginal health access centre | 1 | 0 | 1 |
| Community health center | 5 | 0 | 5 |
| Community nursing agency | 0 | 1 | 1 |
| Academic setting | 2 | 1 | 3 |
| Family health network | 1 | 1 | 2 |
| Family practice unit | 4 | 0 | 4 |
| Health service organization | 1 | 0 | 1 |
| Long term care facility | 2 | 0 | 2 |
| FP office | 1 | 0 | 1 |
| Mental health service | 3 | 0 | 3 |
| Other | 4 | 0 | 4 |
| Hospital department | 4 | 0 | 4 |
| Solo physician office | 1 | 0 | 1 |
| Missing data | 3 | 1 | 4 |
| Total | 32 | 4 | 36 |

A chi-square analysis for this comparison was not significant, $\chi^2(9) = 9.3$, $p > .05$, indicating no differences in whether NPs believe they function within their full scope of practice across the different practice sites. However, with the small number of individuals per cell, this result should be interpreted with caution.

A significant difference was found between those NPs whose role was clearly defined and whether the NP functioned within their full scope of practice, $\chi^2(2) = 7.1$, $p < .05$ (see

Figure 4). Those NPs who functioned within their full scope of practice were significantly more likely to have their role clearly defined.

**Figure 4. NP functioning within their scope of practice by clearly defined role**




Functioning within the full NP scope of practice was also examined for whether the NP specialized or cared for specific populations (see Table 35 for post program frequency counts).

**Table 35. Do you "specialize" or care for a specific population? * Do you function within your full scope of practice?**

| Do you "specialize" or care for a specific population? | Full Scope of Practice | | Total |
|---|---|---|---|
| | Yes | No | |
| Yes | 16 | 3 | 19 |

| | No | 13 | 1 | 14 |
|---|---|---|---|---|
| Total | | 31 | 4 | 36 |

A chi-square analysis did not indicate a significant relationship, $\chi^2(2) = .87, p > .05$. Thus, whether the NPs specialized in treating specific types of patients had no impact on whether they felt they practiced within their full scope of practice.

The next comparison looked at scope of practice and where the FP with whom they collaborate was located. Table 36 presents the post program frequencies for this comparison.

**Table 36. Where is the FP with whom you collaborate located? * Do you function within your full scope of practice?**

| Where is the FP with whom you collaborate located? | Do you function within your full scope of practice? | | Total |
|---|---|---|---|
| | yes | No | |
| **Combination (on and off site)** | 11 | 1 | 12 |
| **Off-site** | 8 | 1 | 9 |
| **On-site** | 11 | 2 | 13 |
| **Total** | 36 | 4 | 34 |

Similar to the previous results, a chi-square analysis did not indicate a significant relationship, $\chi^2(2) = .30, p > .05$. Thus, where the FP was located did not influence whether the NPs felt they practiced within their full scope of practice.

It was also of interest to examine whether previous experience with NP/FP collaboration influenced whether the NP worked within their full scope of practice. Table 37 shows that most of responses were from NPs/FPs who had previous experience with an NP/FP collaboration.

**Table 37. Have you had any previous experience with FP/NP collaboration? * Do you function within your full scope of practice?**

| Frequency | | Do you function within your full scope of practice? | | Total |
|---|---|---|---|---|
| | | Yes | No | |
| Have you had previous experience with FP/NP collaboration? | Yes | 15 | 2 | 17 |
| | No | 4 | 0 | 4 |
| Total | | 19 | 2 | 21 |

The final chi-square analysis did not indicate that previous experience with an NP/FP collaboration impacted on the NPs report of functioning within their scope of practice, $\chi^2(1) = .52, p > .05$.

NP characteristics and work satisfaction. For the continuous data, NP characteristics associated with their work satisfaction were examined using correlational analyses. The Pearson correlation coefficient determines the strength of a linear relationship between two variables by computing z-scores. Thus, the coefficients results are between -1 and +1, where correlations greater than .07 are considered strong and between .3 - .7 are considered moderate[7].

The NPs' age and number of years the NP had been nursing influenced a number of factors associated with their position.

Significant correlations were identified for age with: their perceived status in the community $r(32) = .36, p < .05$, their professional interaction with other disciplines, $r(33) = .36, p < .05$, their perceived ability to deliver quality of care, $r(33) = .39, p < .05$, and satisfaction with their benefits package, $r(33) = .48, p < .01$. In all cases, the correlations were positive indicating that the older the NP: the higher their perceived status, ability to deliver quality

care, the greater the inter-disciplinary interaction and the happier they are with their benefits package.

The greater the number of years nursing also showed a significant relationship with the NPs' perception of their ability to deliver quality care, $r(33) = .461$, $p < .01$ and satisfaction with their benefits package, $r(33) = .461$, $p < .01$. More years in nursing, however, indicated a negative linear relationship with the average number of patients seen per day, $r(33) = -.402$, $p < .05$, meaning that the greater number of years nursing, the fewer the number of patients seen per day.

Neither the age of the NP, the amount of time they had been a NP nor the number of years nursing had an impact on the type of service provided (e.g., caring for: major acute illness, minor acute illness, wellness/health promotion, chronic illness or palliative patients); whether the NP felt they functioned within their full scope of practice or in their ability to deliver care in the way that they would like.

*NP satisfaction and collaboration*

The Collaborative Practice Questionnaire (Jones and Way) that measures the degree of collaboration and the satisfaction with that collaboration was used to examine NPs' personal characteristics and satisfaction with working conditions. Each scale was collapsed to a combined grand mean score, which was then compared to the continuous factors using Pearson's correlation coefficients.

<u>Satisfaction with collaboration and personal characteristics</u>. The age of the NP, the number of years practicing nursing and the number of months as a licensed NP were examined for satisfaction for the NP/FP collaboration. Of these three variables, the number of months as a licensed NP was significantly related to satisfactions levels, $r(40) = .478$, $p < .001$. Thus, the greater the number of months as a licensed NP, the more satisfied the NP was with the collaborative relationship.

<u>Satisfaction and work characteristics</u>. When examining the type of services provided and satisfaction levels, significant linear relationships were found. Those NPs with higher satisfaction scores reported a greater percentage of time monitoring chronic illness, $r(40) = .525$, $p < .001$. Bordering on significance was a negative relationship between satisfaction

and the percentage of time spent in wellness care and health promotion, $r(40) = -.251$, $p = .059$. That is, the greater amount of time NPs spent in wellness care and health promotion, the less satisfied they are with the NP/FP collaboration.

Degree of collaboration and NP personal and work characteristics. The Collaborative Practice Questionnaire (Jones and Way) was also used to examine personal characteristics and working conditions. A composite score for the level of agreement/disagreement of current collaborative efforts was computed and compared with the NP's type of practice. No significant results for the collaboration score and personal characteristics were found. A significant relationship was found for collaboration and percentage of time spent in care of minor acute illness. Higher collaborative scores were associated with more time spent caring for patients with minor acute illness, $r(40) = .352$, $p < .05$.

A multiple linear regression was then employed to address the following question: How accurately do the working conditions (e.g., average number of patients seen per day, % of patients for whom the NP is the primary care provider, whether the NP believes they function within their full scope of practice, whether the NP feels that they are able to deliver care in the manner they would like) predict the NPs' composite collaboration score? A multiple linear regression allows the prediction of one variable (the dependent variable) from several other independent variables. Once again, the composite score of the current collaboration scale (Jones and Way Collaboration Questionnaire) was used as the dependent variable. The enter method was employed for the regression analyses. Table 38 displays the descriptive statistics for these factors.

**Table 38. Descriptive statistics for NP working conditions**

| | N | Mean | *SD* |
|---|---|---|---|
| Do you function within your full scope of practice?* | 36 | 1.11 | .31 |
| % of patients of whom you are their primary care provider? | 34 | 54.62 | 40.23 |
| Average number of patients seen per day? | 36 | 14.53 | 5.10 |
| Are you able to deliver care in the way you would* like? | 35 | 1.26 | .44 |

Note: * 1 = yes, 2 = no

A significant portion of the variation in collaboration scores was accounted for by the predictor variables. A significant regression equation was found ($F(4,35) = 4.81$, $p<.01$), with an $R^2$ of 35.5%. Table 39 presents the results of this regression.

**Table 39. Regression analysis summary: NP functioning within their scope of practice and collaboration scores**

| | Unstandardized Coefficients | | Standardized Coefficients | | |
|---|---|---|---|---|---|
| | *B* | *SE B* | Beta | t | Sig. |
| (Constant) | 39.23 | 7.9 | | 4.92 | .000 |
| Average number of patients seen per day? | -.714 | .27 | -.421 | -2.63 | .012 |
| % of patients of whom you are their primary care provider? | -.114 | .03 | -.522 | -3.71 | .001 |
| Do you function within your full scope of practice? | 5.114 | 4.9 | .173 | 1.02 | .311 |
| Are you able to deliver care in the way you would like? | -8.74 | 3.7 | -.426 | -2.33 | .025 |

a Dependent Variable: measure of collaboration

As indicated in Table 39, NPs who reported greater collaborations scores also reported seeing fewer patients seen per day, had more patients who the NP was considered their primary care giver and were more likely to deliver care in the manner they preferred.

The same variables were examined using linear regression for degree of satisfaction with the collaboration. The regression equation was not significant ($F(4, 35) = 1.12$, $p > .05$) with an $R^2$ of .012. Thus, average number of patients seen per day, % of patients of whom the NP is their primary care provider, whether the NP believes they function within their full scope of practice, and whether the NP feels that they are able to deliver care in the manner they would like did not predict satisfaction with the NP/FP collaboration.

*FP satisfaction with collaboration and degree of collaboration*

For FP personal characteristics, a significant linear relationship was found for both satisfaction with the collaboration ($r(14) = .54$, $p < .05$) and degree of collaboration ($r(14) = .64$, $p < .01$) with the number of years of medical experience. The greater the medical experience, the more satisfied and the better collaboration scores reported.

<u>FP satisfaction with collaboration and degree of collaboration related to working conditions</u>. With regard to working conditions, FPs reported a significant relationship between the their ability to access the services of the NP and satisfaction ($r(14) = .69$, $p<.01$). As well, a highly significant relationship was found between the total overhead costs associated with the presence of the NP and satisfaction ($r(14) = .95$, $p<.01$) and collaboration ($r(14) = .97$, $p = .001$). Thus, when FPs could easily access the services of the NP and when they considered the cost of having the NP was not too high, they were more satisfied and believed the collaboration was working well.

The amount of physician time required to support the NP was also significantly related to: the FPs report on whether the NP appropriately consults with him/her ($r(14) = .58$, $p<.05$); the physician's ability to access the services of the NP ($r(14) = .57$, $p<.05$); and, the length of time the NP spends completing documentation, ($r(14) = .57$, $p<.05$).

The FP also reported that the length of time that the NP spends with patients was significantly associated with: the patients' increased access to services ($r(14) = .50$, $p<.05$); the better the NP can apply knowledge and expertise in linking patients to community resources ($r(14) = .58$, $p<.05$); and, the greater the time that the NP can focus on community education and health promotion ($r(14) = .63$, $p<.01$).

To examine which working conditions predicted FP satisfaction with the collaboration, a linear regression was conducted. The Collaborative Practice Questionnaire (Jones and Way) composite score from the Jones and Way Satisfaction Scale was utilized as the dependent variable. The predictor variables included: reduces physician workload; allows physician to focus their skills in the care of more acute/complex patient problems; allows practice setting to increase the patient population; allows patient increased access to services; the physician's ability to access the services of the NP; the length of time the NP spends with

patients; and, the quality of care provided by the NP. Table 40 presents the descriptive statistics for these factors.

**Table 40. Descriptive statistics for FP satisfaction of collaboration and working conditions**

| | N | Mean | *SD* |
|---|---|---|---|
| Composite satisfaction score | 14 | 20.74 | 10.04 |
| Reduces physician workload* | 14 | 2.29 | .914 |
| Allows physician to focus their skills in care of more acute/complex patient problems* | 14 | 2.00 | 1.03 |
| Allows practice setting to increase their patient population* | 14 | 1.93 | .82 |
| Allows patients to increase access to service* | 14 | 1.29 | .46 |
| Physician ability to access the services of the NP** | 14 | 3.36 | .74 |
| Consultation with physician when appropriate** | 14 | 3.50 | .51 |
| Length of time NP spends with patients** | 14 | 3.50 | .650 |
| Quality of care provided by NP** | 14 | 3.93 | .267 |

Note: * 1 = strongly agree to 4 = strongly disagree; ** 1 = very dissatisfied to 4 very satisfied

Based on this analysis, a significant portion of the variation in satisfaction scores was accounted for by the predictor variables, ($F(8,5) = 8.5$, $p = .015$), with an $R^2$ of .93. Thus, 93% of the variance in FP satisfaction with the collaboration can be explained by the predictor variables. Table 41 presents the results of this regression.

**Table 41. Regression analysis summary: FP working conditions and satisfaction scores**

| | | Unstandardized Coefficients | Standardized Coefficients |
|---|---|---|---|

| | B | SE B | Beta | t | Sig. |
|---|---|---|---|---|---|
| | | | | | |
| (Constant) | 80.138 | 19.187 | | 4.177 | .009 |
| Reduces physician workload | 5.197 | 1.897 | .473 | 2.739 | .041 |
| Allows physician to focus their skills in care of more acute/complex patient problems | -4.298 | 2.236 | -.444 | -1.922 | .113 |
| Allows practice setting to increase their patient population | -.074 | 2.394 | -.006 | -.031 | .976 |
| Allows patients to increase access to service | 6.998 | 3.990 | .327 | 1.754 | .140 |
| Physician ability to access the services of the NP | -10.002 | 1.877 | -.742 | -5.329 | .003 |
| Consultation with physician when appropriate | -6.612 | 2.544 | -.342 | -2.599 | .048 |
| Length of time NP spends with patients | -1.371 | 2.642 | -.089 | -.519 | .626 |
| Quality of care provided by NP | -2.550 | 5.532 | -.068 | -.461 | .664 |

a. Dependent Variable: Composite satisfaction score

As Table 41 indicates, the FPs were more satisfied with the NP/FP collaboration when the NP reduced the physician's workload, when the FP is able to access the services of the NP, and when the NP consulted appropriately with the FP.

As before, the same predictor variables were examined using linear regression for the Collaborative Practice Questionnaire (Jones and Way) composite collaboration score. The

regression equation was not significant ($F(8,5) = 2.2$, $p > .05$) with an $R^2$ of .78. Thus, physician workload reduction, the opportunity for the physician to focus their skills in the care of more acute/complex patient problems, the NP influence on whether the practice setting increases the patient population, the NP influence on increased access to services for the patients, the physician's ability to access the services of the NP, the length of time the NP spends with patients and the quality of care provided by the NP did not predict the FPs score of the NP/FP collaboration. Further research should examine whether collaboration is more associated with interpersonal factors such as trust, respect, ability to communicate well, etc.

## RESULTS FOR THE NP/FP POST PROGRAM INTERVIEWS

Following the program, interviews were conducted with both NPs and FPs. Telephone interviews were conducted with those NPs and FPs who exhibited a high level of participation in the program (> or = to 50% of participation), as well as those who did not participate fully in the mentoring and education program (< 50%). Results for the high participants are given separately for the NPs and the FPs. The low participant results include both NP and FP results combined.

### *Qualitative results for the high participant NP interviews*

#### Description of the interview group

Thirty from a total of 38 high participant NPs agreed to participate in the interviews. Distribution across regions and mentor groups are reported in. Twenty-six of the individuals who participated in these interviews also completed the surveys. Table 42 also categorized the data into Group 1 and Group 2 participants. Group 1 participants had their orientation and educational component during a face- to – workshop facilitated by the mentors. Group 2's orientation was conducted by teleconference with the project facilitator and the education component through web-based training.

**Table 42. High participant NP group**

| | Group 1 | Group 2 | Total |
|---|---|---|---|
| East | 4 | 1 | 5 |
| Central 1 | 3 | 1 | 4 |
| Central 2 | 4 | 0 | 4 |
| North 1 and 2 | 1 | 0 | 1 |
| NW1 | 2 | 1 | 3 |
| NW2 | 2 | 0 | 2 |
| South | 1 | 2 | 3 |
| SW1 | 3 | 1 | 4 |
| SW2 | 2 | 0 | 2 |
| SW3 | 2 | 0 | 2 |
| **TOTAL** | 24 | 6 | 30 |

In reporting the results, percentage values represent responses from the total number of NP participants (n = 30; 1 response = 3.3%). Where responses were made by only one individual, no percentage value is given.

### General impressions of the SIP program by NPs

The first question asked the NPs to give their general impressions of the SIP program. Approximately one third of NPs (37%) had general positive comments about the program. Examples included "I thought it was a valuable project"; "Well-organized, a great concept"; "I can't say enough positive things about the program. I'm still in it, and I love it". Ten percent had positive comments regarding the support provided by the program, such as "I like the idea of not being out there on your own; knowing you can reach someone if you need to... There's someone you can turn to if you have questions". Positive comments

regarding specific aspects of the program were mentioned frequently. The most frequent response was that it provided the opportunity to share information/learn from others' experience (23%).

The most repeated negative comment, from almost one third of NPs (30%), was that the program did not meet their needs. In most cases, this was because participating NPs felt they were already collaborating well. In contrast, one NP felt the program was not able to help her resolve difficulties because of the specific nature of the issues in the practice.

**Aspects of the program that helped collaborative practice for NPs**

The second question asked whether there were aspects of the program that helped their collaborative practice. Forty-three percent of NPs reported that the education component, the modules and/or exercises were helpful in sparking discussion between collaborating partners and clarifying roles. These included the on-line exercises, the Practice Based Small Group Learning (PBSGL) modules and exercises such as the role-definition exercise. Twenty-three percent of NPs reported that the mentoring was helpful, such as, "They showed me … collaborative practices. I was able to see some of my colleagues working well together in collaborative practice. Seeing examples was helpful".

Twenty percent reported finding the teleconferences helpful. As well, 20% reported that the discussion of barriers and facilitators with their collaborating physician was helpful. One NP described the process: "Initially, we talked about barriers to practice and what facilitates the process. It allowed myself and [my collaborating physician] to sit down and talk about it, form a plan for a year where we'll sit down quarterly and discuss barriers, and work toward a solution".

Thirteen percent of NPs found the opportunity for networking helpful, specifically the face-to-face meetings. Two of these (7%) commented that having the face-to-face meeting with physicians in Toronto was helpful in terms of educating physicians about the NP role. One described it as follows: "Being able to have a physician with us in Toronto – it was an eye-opener for what NPs do".

Advantages reported for the SIP program included:

- Learning to avoid mistakes others had made
- Allowed the development of models for collaboration for specific patient populations
- Allowed me to develop a collaborative group, which has increased the comprehensiveness and frequency of patient care
- Increased collaboration with other physicians in the group, not just the SIP partner
- Helped us structure our collaboration by having time together away from the clinic
- Helped me know what questions to ask, to realize I could change my contract

Twenty percent of the NPs interviewed reported that the SIP program had no impact on their collaborative practice. One NP reported that her collaborating partner could not attend the teleconferences, so they were unable to move forward. Another commented that physicians should be interviewed before joining the program to assure their willingness to participate.

**Aspects of the program that hindered collaboration**

The third question queried whether there were aspects of the program that hindered their collaborative practice. The majority of NPs (57%) did not feel there were any aspects of the program that hindered collaboration. For the remainder, lack of physician buy-in and support (23%) and lack of physician participation (7%) were cited as hindrances to collaboration. One NP expressed it as follows: "Without physician buy-in, we aren't going to get anywhere". Thirteen percent of NPs felt that the paperwork and other administrative tasks related to the SIP program were too time-consuming.

### Structure of collaboration

The fourth question asked participants to describe their practice in relation to patient population, practice setting, type of practice and whether the physician was on or off site.

*Patient population*

The majority of NPs (66%) reported working with a general patient population. Of these, three NPs (10%) have special interest areas within a general practice (e.g., diabetes, chronic conditions, health promotion, women's health, geriatrics, etc.).

*Practice Setting*

The majority (63%) of NPs reported working in an urban setting. Of these, two NPs (7%) reported seeing patients from both urban and rural areas within an urban setting. The remaining NPs (37%) reported working in a rural setting or a small town. Of these, one NP reported working on various aboriginal reservations on a rotating basis.

*Type of Practice*

Twenty percent of NPs reported working in hospital settings. Of these: three (10%) worked in emergency departments; 2 (7%) worked in NP clinics within emergency departments, and one NP described her practice as a walk-in NP clinic within a hospital. Twenty percent reported working in family practice settings (this included one NP who works in an academic family practice unit within a hospital). Seventeen percent reported working in freestanding NP clinics. Of these, one described the setting as a freestanding NP clinic in a Native Friendship Centre. Ten percent reported working in outpatient clinics. In two of these three cases, these were off-site outpatient clinics from hospitals. Thirteen percent reported working in academic settings (this includes the NP who works in a family practice teaching centre within a hospital). Thirteen percent reported working in community health centres and 7% reported working within a family health network.

*Physician on or off-site*

The majority of NPs (60%) reported working with a physician on-site. Twenty-seven percent reported working with a physician off-site and 13% reported working with physicians both on- and off-site due to working in multiple settings or with multiple partners.

### Facilitators to collaboration

Question five asked "For your specific situation or practice, what factors do you think facilitate collaboration?" The most frequently mentioned facilitators to collaboration had to do with NP/FP relationships and physician attitudes toward collaboration. Nearly half the NPs (47%) identified openness to collaboration as an important facilitator. One NP summed it up like this: "The physicians we work with are collaborative… I feel our opinions are valued by the physicians".

Along the same lines, mutual trust and respect were identified as important facilitators by almost one-third of NPs (30%). Having a personal relationship or compatible personalities was mentioned by 20% of NPs. The idea that a comfortable working relationship develops with time was also mentioned by two individuals. Seventeen percent mentioned a shared vision of care between the NP and physician. One NP described it as follows: "… mutual understanding that we have the same underlying goals or practice styles".

Physician knowledge and understanding of the NP role was another important facilitator, cited by over one quarter of NPs (27%). A further 13% mentioned understanding of roles and acknowledgement of NP scope of practice by physicians. These ideas come together in the following quote from one NP: "We seemed to be on the same wavelength… [my collaborating physician] had experience working with an NP. She was very positive about what I was doing, and that's why she wanted to be part of it". NP experience and knowledge of working with physicians or experience developing collaborative teams was cited by 20% of NPs.

Communication amoung health care providers were cited by over a quarter of NPs (27%). Thirty percent of these NPs mentioned the importance of easy access to physician partners, that is: the physical layout of the work setting, having the physician on-site, and being able to discuss cases face-to-face with physician partners. Two NPs (7%) mentioned the importance of using different modes of communication when the physician is off-site, including the phone, fax, and e-mail, as well as having opportunities to meet face-to-face. Along these lines, the availability of collaborative partners to each other was mentioned by 10%. Other communication-related responses included considering physician needs early in the collaboration process and the NP providing education to the physician.

The importance of having support from individuals or agencies other than the collaborating physician was also noted. Ten percent mentioned support and openness of the work setting (e.g., hospital, CHC) to working with NPs. Seven percent mentioned administrative support in terms of the set-up of the practice, having access to equipment, etc. The support of nursing, clerical and support staff, educating them regarding the NP role and their understanding of the NP role was mentioned by 13% of NPs. Communication with office staff was mentioned by 7%. Support of the community was cited by seven percent of NPs. This included support of physicians other than the collaborating physician; patient understanding of the NP role; and the public.

Several different issues related to funding were reported by several NPs as facilitators to collaboration. Ten percent mentioned the importance of having a financial incentive for physician partners. Support of funding agencies and the availability of adequate funding was mentioned by 2 NPs (7%). Seven percent mentioned the importance of NP recognition of the FP and that the financial incentive is one way to recognize the FP's contribution in terms of time and effort.

Some NPs mentioned factors specific to their specific work situations or settings, such as, sharing patients or working as a team. Specifically:

- Being in a Family Health Network allows us to provide multidisciplinary care.
- We work as a team, have the philosophy that patients are patients of the CHC
- [In a hospital setting] all of the NPs and physicians take turns covering triage and urgent care. When a physician is on triage, they become our consulting physician, so it takes the weight off the other physicians. When an NP is doing triage, we also have to consult with a physician who is booked, so it's more disruptive
- [From an NP who works with homeless and other marginalized people] with this population it helps to have a psychiatrist as a collaborating partner

Other facilitators to collaboration noted by NPs included:

- Commitment to developing innovative projects
- Coming into a setting where the NP role was long-standing; not having to break new ground
- Beginning as partners
- Using best practice guidelines
- Having medical directives

**Barriers to collaboration**

Question 6 asked NPs to indicate from their specific situation or type of practice, those factors that were barriers to collaboration. In many ways, the barriers mirrored the facilitators. A lack of physician buy-in (33%) and having the collaborating physician off-site (one case, in a different city) (20%) emerged as important barriers. Lack of communication with the collaborating physician was also mentioned (7%).

Equally important was the funding structure under which collaborative teams work. Specifically, the fee-for-service structure and lack of physician remuneration for consultation were cited as important barriers by 33% of NPs.

NP scope of practice issues were also frequently named barriers (20%). Examples included limited prescriptive authority and an inability to refer to other professions.

A number of physician-related barriers were mentioned by NPs:

- Physician time constraints and availability for consultation (27%).
- Physicians concerns about professional liability (13%)
- Physicians perceive the NP was infringing on their scope of practice (10%)
- Physician unwillingness to change care provision model and the NP having a different belief system from the collaborating physician about the type of care that should be delivered (7%)

- Physicians’ concerns about increased workload

Lack of support from individuals and institutions other than the collaborating physician was cited by a number of NPs. NPs specifically noted lack of support from physicians in the community, administration and the Ontario Medical Association and Canadian Medical Protective Association.

Other barriers identified by NPs included:

- Working alone; not having a colleague present to discuss cases with
- Lack of experience
- Independently seeing complex, orphan patients
- Changing locations, restructuring
- Difficulty convincing others of the significance of the program
- Working within a physician model

**Mentoring and ongoing support**

The next question asked whether the mentoring and on-going support assisted in supporting the integration of the NP position within the practice. Most NPs (70%) had positive comments about the mentoring. From that group, over one-third (37%) found it helped in integrating the NP role within the practice. Almost half found the opportunity for discussion and feedback and sharing information helpful. Comments included, “I enjoyed having someone who could answer questions,” and “there were some practical suggestions”. Emotional support and having the opportunity to talk to others was also mentioned (13%).

The remaining NPs reported that the mentoring was minimally or not at all helpful. In most cases, this was because the NP felt his or her collaborative practice was already well established. Other negative comments about the mentoring included:

- The mentoring team was inexperienced or that they themselves had more experience than the mentor did (13%)

- Mentors worked in a different practice setting and were dealing different issues (10%)

Other comments regarding the mentoring included:

- The teleconference PBSGL modules were helpful (7%)
- The mentors modelled how they work together, a positive relationship (7%)
- Mentors facilitated communication between the program administration and the participants
- Mentors educated physicians about NP role and functioning within their scope of practice
- Consultation with mentors helped introduce role of NP in the practice
- Having the opinion of the mentor FP in teleconference was helpful

Specific comments included: "The mentors helped me recognize and implement changes"; "They empowered me, gave me ammunition to go forth with my ideas"; and, "The mentors facilitated, kept us on track, and encouraged us".

**Access to mentors**

Question 8 asked NPs about access to their mentor in relation to availability, time scheduling and mentoring style.

*Availability*

The majority of NPs (83%) reported that the mentors were accessible. Many reported that they used e-mail to communicate with the mentors.

*Time scheduling*

Seventy percent of NPs responded positively, describing time scheduling as flexible, accommodating, etc. The remainder noted that it was difficult to coordinate a large group, or that they found the times inconvenient. Other comments about time scheduling included meeting times changed spontaneously and most of the physicians did not attend.

*Style of mentor*

Most NPs (77%) had positive comments to make about the style of mentoring. Overall, mentoring was described as relaxed, casual and democratic. Mentors were described as good facilitators (13%). Other comments about the mentors included:

- o We learned from each other
- o The mentors improved with experience
- o It was easy because we already knew each other
- o The in-person meeting helped, putting a face to the name

**Education component of the program**

To address specific aspects of the program, NPs were asked whether the educational components, i.e., the collaborative practice model and exercises, assisted collaborative efforts. Twenty percent of NPs found the education component to be excellent or very helpful. A further 17% reported that this aspect was somewhat helpful.

NPs who felt the education component of the program was not helpful cited several different reasons.

- o Found this component to too time-consuming (23%). Two NPs commented they felt this was a "make-work project". One commented that, "I can't apply a model to the real world"
- o Already new much of it or were already collaborating well (17%)

Of note however, two NPs indicated that the program would be helpful for people just starting out in collaborative practice

Twenty-three percent found the exercises helpful in terms of clarifying issues and stimulating thought about collaboration. One NP commented, "They're a good guide to clarify issues and how you might resolve them. They help you pinpoint what you need to work on". Two NPs (7%) felt the role identification exercise was particularly helpful.

Ten percent felt that the education component facilitated and gave structure to discussions with their partners. One NP commented that the model, "helped to lay the foundation in terms of shared philosophy and vision" and another stated, "the exercises validated that we are on the right track".

Ten percent commented that the PBSGL modules were helpful. One NP commented, "The practice based small group learning enhanced our confidence in providing good collaborative care because they were evidence-based learning modules".

Other comments regarding the education component included:

- The patient information sheets/handouts were helpful; we are now giving them to patients and other providers
- We plan to continue meeting as a group, using the case study modules
- The initial meeting in Toronto was helpful
- I liked the system approach, having a model to work through
- Have been able to use handouts to educate other providers
- The education component kept us on track
- Since the FP and the NP attended the same session and both learned the same thing, they could utilize it in practice

### Web-based support

NPs were asked whether they found the web-based support helpful. Overall, the response to the web-based support was not encouraging. The majority of NPs (77%) reported that they did not use it or used it very little. Many (60%) reported that the using the web site was time-consuming and frustrating, and reported technical problems with passwords, etc. Ten percent expressed disappointment that the web-based conferences did not work. A number of negative comments focussed on the chat room (message board) (20%). Participants reported that it was not helpful and not well used. Some expressed disappointment that "it never got off the ground".

**Sustaining collaborative practice**

NPs were asked whether structures were now in place to sustain their collaborative practice. A majority of NPs (60%) felt that the structures are in place to sustain collaborative practice. Comments included:

- The structures are in place because of the physicians I work with
- The structures were already in place before program
- The community is supportive

A further 30% felt that a good foundation had been laid, but that more work was needed to sustain collaboration. One NP commented, "It's a learning curve all the way around". Only two (7%) felt that the structures were not in place to sustain their collaborative practice.

Barriers mentioned included: barriers in the community, the need for ongoing education, physicians are resistant to change, and, issues need to be resolved at the Ministry level.

**Successful strategies that increased collaboration and supported integration of the NP role within the practice**

The NPs were asked to provide instances of successful strategies that worked to increase their collaboration and supported their successful integration of the NP role within their practice. The importance of having regular meetings and setting aside time to collaborate was mentioned by over one-third (37%) of NPs. One NP described it as follows: "Things like concretely scheduled meeting… I also have to say a scheduled face-to-face meeting, so you're able to see and talk to the person, facilitates it". Other strategies related specifically to communication included:

- Addressing concerns and discussion of roles between the NP and physician partners (20%)
- Using fax and telephone for consultation and communication of lab results; being easily accessible via fax or phone (13%)
- Creating user-friendly consult sheets

- Consulting with physicians when they are not too busy, for example, during lunch
- Developing a coverage group, streamlined communication and how patients are shared
- Doing chart audits
- Addressing scheduling issues to allow time for collaboration
- Using the computer messaging system for referrals
- Keeping physician up-to-date regarding patients

The idea that collaborative relationships must be developed over time and that collaboration is facilitated by NP familiarity with the collaborating physician or the work setting was mentioned by 30% of NPs. One NP expressed it as follows: "We've gotten to know each other, and have worked together for so long, that trust and respect has been well formulated".

Providing education to others emerged as an important strategy. Specific comments included:

- Physicians and other professionals about the NP role, including legal and malpractice issues as well as standards of practice (13%)
- Support staff regarding scheduling of NP and FP patients (7%)
- The public regarding the NP role

The idea of developing roles and tools such as policies, procedures and directives early on in the collaboration was cited by 20%. Some NPs mentioned having the following mechanisms in place that helped collaboration. For example:

- Having an opiate agreement in place
- Developing a collaborative practice agreement
- Preparing things (e.g., medical directives, follow-up plan for patients) in advance, then presenting them to the FP

Seven percent described having a realistic time frame for role introduction and orientation, then gradually increasing the NP role. Ten percent mentioned having a formal system in place to review cases with the physician partner. For example, one NP described "presenting cases once per week. Either the physician presents or the NP presents, like rounds". Ten percent described making decisions and working as a team as an important strategy. One example was offering to do on-call for the physician partner when the physician was very busy. Other comments included:

- Meeting with decision-makers in your unit
- NP sitting on physician committees
- Getting to know who would support me, be my advocate
- Having the opportunity to identify desired outcomes
- Having the opportunity for NP leadership and project development
- Having multiple physicians to collaborate with
- Giving respect to nursing staff, letting them know I was willing to help out
- Building on your experience
- Providing exposure to collaborative practice for new physicians in medical school so they are more receptive

**Recommendations for supporting the development of new collaborative teams**

The last section of the questionnaire asked for recommendations. For this question, NPs were asked to provide recommendations for supporting the future development of new collaborative teams. Twenty percent mentioned changes in fee structure and/or providing financial incentive for physicians as a way to support collaborative teams. One NP described the need for "adequate funding for both NP and FP participation". The need for education about collaboration and about the NP role was also frequently mentioned. For example:

- Increase awareness about NP role for physician and others (13%)
- Educate NPs about collaboration as well (7%)
- Educate the public about the NP role (7%)
- Integrate medical students with NPs during their education (7%)

Ten percent suggested providing examples or models of agreements between other collaborative teams and presenting ways in which FPs and NPs can work together. Several had suggestions regarding communication between collaborating partners. These included:

- Having regular meetings (10%)
- Setting up communication processes; reporting back to each other about what's been done and what needs to be done for different patients
- NP and physician having access to each other
- Performing an annual review in terms of medical directives, what went well, what still needs to be done as well as the community's needs
- Communication with the team, having input into your role, being assertive
- Interview each other at the beginning, get to know expectations, plan how you will communicate
- Create standards of care, outline roles and responsibilities

Seven percent of NPs commented on the need to have the support of physicians. One NP described it as follows, "It's important that the NP have a fully committed physician, committed to working on the collaborative model". Seven percent felt that changes to the Nursing Act to support greater autonomy of NPs would be helpful. The same number of NPs felt that collaboration works better in a shared-care environment. One NP described it as follows: "What works much better is when it goes both ways; where the NP is there to share in the care of a group of patients, so that each can do what fits with their skill set".

The structure of the collaborative partnerships was mentioned by 7%. Comments included:

- Have more than one NP in a health team so the NP is not working in isolation
- Have smaller groups for collaborative practice
- It might work better to have several NPs and one FP, instead of the other way around

Other suggestions included:

- Need to have collaborative mindset from the start

- Have to adapt and adjust to individual situations
- Need to have realistic expectations for project outcomes and deliverables
- Opportunities to support NP/FP collaboration in the broader community are needed
- Need to use resources such as the NPAO web site
- Being aware of differences in how NPs/FPs schedule their time

**Recommendations for future mentoring and support programs**

The next question asked for recommendations for future mentoring and support programs. An important recommendation (20%) was to have groups who work in similar settings and/or mentors from similar settings, rather than assigning groups by geographical location. Seventeen percent of NPs noted that some teams were not new to collaboration. They felt it was important to make sure participants are new to collaborative practice or are asking for help.

Recommendations regarding how the SIP program was run and structured included:

- Clarify expectations of participants and better define roles for mentors (17%)
- Have meetings with mentors one-on-one instead of in a group
- Have smaller groups for mentoring
- Have a program to incorporate involvement for teams, as many NPs collaborate with more than one physician
- Provide opportunities for NPs to meet with the NP mentor, physicians with the physician mentor (without the other present)
- Provide opportunities for new teams to "job shadow" mentors
- Use a "buddy system" instead of mentoring
- Streamline or minimize the administrative/paperwork aspects of the program

Recommendations regarding the mentoring component included:

- The need for mentoring was mentioned (20%). Seven percent of this group felt mentoring should be ongoing and that the mentors should have experience with the SIP program

- Recruit more experienced mentors (17%). One NP commented, "It would be nice to have people with experience that enjoy their relationship with their physician partners, who have had experience with different start-up projects; somebody who has gone through the ropes, knows how it works on a practical level".

Recommendations regarding the education component included:

- Educate program participants about NP and physician roles, as well as information on access to resources in terms of roles, such as standard templates for collaborative practice (14%)
- Include evidence based learning projects, which could be done together (7%)
- Provide group learning opportunities for NPs and FPs
- Have more educational activities, more follow-up on them, and a more structured format
- Make exercises more concise; cover more cases

Recommendations regarding the web site included:

- Write up some of the information from the web discussions (e.g., new developments; what worked and what hasn't)
- Use the web site to present case-based postings that people could reply to and then discuss
- Have links to other web sites
- Simplify web-based exercises

A number of comments focused on in-person meetings, which many felt were a valuable component of the program. One NP remarked, "You're together, you're focussing, there are no distractions because you're there physically. There's more commitment, too, with the face to face, it generates more commitment to one another". Seventeen percent suggested having more frequent face-to-face meetings or workshops. It was also recommended that SIP have a meeting at the end of the project to discuss successes and challenges (7%). Further suggestions included:

- Support teleconferences, as it is difficult for people to take time to meet in person (10%)
- Provide more frequent contact with mentors and the group (7%)
- Have face-to-face meeting early on in the program (7%)
- Have In-person meetings for the area group
- Institute meetings for new teams every two months or quarterly

Seven percent commented on NP and FP involvement. NPs felt there should more involvement of NP/FP dyads and stressed the importance of having both partners involved in the project. Related comments included:

- Promote increased FP involvement/buy-in
- Answer/respond to FP questions and concerns
- Encourage participation of the Nurse Practitioner Association and the Ontario Medical Association

### *Qualitative results for the high participant FP interviews*

Like the previous NP results and the following low participant results, all interviews used the same questions for comparison purposes.

#### Description of FP interview group

All results reported are based on interviews with 10 FPs from 21 FPs identified as "high participants". Five of the FPs who participated in the interviews also completed the surveys. Distribution across the province included: east (1), central (2), north (3), northwest (1), south (1) and southwest (2). Note that all FP participants were in Group 1. One respondent equals 10%.

#### General impressions of the SIP program

Forty percent of FPs had general positive comments about the program. Examples include "well-organized" and "well-run". Twenty percent provided positive feedback regarding the initial meeting in Toronto. One FP commented that the meeting was helpful in terms of new ideas about collaboration. Twenty percent felt the program was not necessary in their specific situation as they already had a well-established collaborative practice.

Other positive comments included:

- It was an interesting concept as a way to look at interdisciplinary practice
- I did learn a lot about the NP role and expectations… I was happy to have some guidelines as to what to expect
- We made connections with other FPs and NPs doing similar things
- It is beneficial to integrate other professions into our health care model

Several negative comments centred on the content and organization of the program:

- It was disappointing; we didn't get as much work done as I thought we would
- I was expecting information sharing with long-established teams, more sharing of protocols and directives
- Not enough content and structure were provided
- It was left to local groups to make things happen
- The definition of collaboration wasn't clear
- A lack of support and funding from sponsors made it difficult to participate and take the time to implement our ideas
- Advertising for program should have made it clear that it was for new teams
- Interesting, but didn't meet our needs
- The monthly meetings were nice to socialize, but didn't help

**Aspects of the program that helped collaborative practice**

Forty percent mentioned having the opportunity to connect with other teams or the support of colleagues was helpful. Thirty percent commented that learning about such issues as NP roles and scope of practice, medical-legal issues and standard of practice was helpful. Thirty percent felt the meeting in Toronto was helpful in terms of defining roles/expectations and how to integrate NP into practice.

Thirty percent mentioned having the opportunity to sit down and talk with the NP partner. One FP commented, "The regular meetings were helpful, in that they forced us to regularly look at how we work together in terms of collaborative practice". Thirty percent felt the teleconferences and face-to-face meetings helped. Comments included:

- The meetings were helpful because they were not structured. People could bring their problems forward, and the more experienced could help those who were new
- The case discussions at the teleconference were helpful

Twenty percent felt the mentoring was helpful. One FP commented that it was helpful to be able to e-mail the mentors about questions or concerns. Other helpful aspects of the program included:

- Discussions around practice styles, problems others had encountered, organizational issues
- The most helpful was hearing from other FPs that it's okay to let go in terms of responsibility, learning about NP scope of practice
- Setting goals was useful

**Aspects of the program that hindered collaboration**

Most FPs (60%) did not feel any aspect of the program hindered collaboration. Aspects that FPs reported as hindering collaboration were:

- The paper-work was too time-consuming
- The teleconferences. There was too large a group, making it a waste of time

- Many weren’t aware of their role (both NPs and FPs)

**Structure of collaboration**

*Patient Population*

Most (60%) reported treating a general population. Specific populations included:

- Eating disorders and addiction
- Aboriginal and Métis
- Rural community with a large elderly population
- Emergency patients

*Rural or urban setting*

The majority of the FPs (70%) reported working in rural or small town settings.

*Type of practice setting*

Twenty percent collaborated in community health centres. Twenty percent reported having a family practice. Other settings included:

- Hospital based settings included out-patient clinics, free-standing NP clinic and emergency department
- Community based settings included health service organizations and hospital-based, free-standing NP clinic
- Emergency department at a hospital
- Free-standing clinic

*Physician on or off-site*

Sixty percent reported working on-site with the collaborating NP. A further 20% reported working at the same site, but not always at same time. The remaining twenty percent reported working off-site.

**Facilitators for collaboration**

Half (50%) mentioned working on-site with the collaborating NP partner. Examples of how this facilitated collaboration included:

- Having access to each other's charts (20%)
- Providing the FP the ability to see the NP's patients as needed (20%)
- Providing the opportunity to have corridor consultations
- Sharing the same office staff

Working as a team, and more specifically, sharing patients, emerged as an important facilitator (30%). One FP described it as follows: "We share the same patient roster, so patients can flow freely between the two of us depending on what they need". Twenty percent mentioned that the NP was filling a role that had previously been unfilled; the need was there". Twenty percent mentioned the experience and abilities of the NP. Twenty percent mentioned patients' positive attitude toward the NP as an important facilitator.

Facilitators related to communication included: having regular team meetings (20%) and the opportunity to collaborate by fax and meet face-to-face. A number of FPs had comments regarding financial factors. This included government paying a "collaboration fee" and a preference that NPs be in a salaried position where overhead costs would be covered.

Facilitators related to the relationship between the FP and the NP included:

- Having confidence in other person's abilities (20%)
- The personality and work ethic of the NP
- Having a good, long-standing relationship with the NP
- Knowing other person's strengths and weaknesses

Other facilitators mentioned included:

- Need a structure where you can facilitate collaborative practice
- The interest must be there

- Need to have the time to collaborate
- Setting is important; a place to meet and to see patients
- The support of management is important

**Barriers to collaboration**

Thirty percent mentioned having the FP off-site as a barrier. In one case, the FP worked in the same building but found even being on a different floor was a barrier in terms of having regular contact and the ability to have corridor consultations.

Twenty percent felt lack of understanding of the NP role was a barrier to collaboration. One FP pointed out that this can go both ways and that a lack of respect or understanding of other person's skill set is a barrier.

Financial barriers included:

- Insufficient funding for NP overhead costs (20%)
- Lack of funding to implement electronic medical records
- Lack of remuneration for collaborating FP
- OHIP policies regarding specialist billing rates (referrals from NPs are paid at lower rates than referrals from FPs)

Barriers involving the structure of collaboration included:

- Making changes in a long-standing practice, whether bringing an NP into a long-standing FP practice or bringing a FP into long-standing NP practice (20%)
- Local structure: the way NPs are paid, to whom they report, how the system is set up
- NP working with more than one FP

Resistance of individuals outside the collaborating team was another barrier. This included: resistance of other physicians in the community to working with NP; pharmacists' resistance to NP; and patient resistance due to a lack of understanding of the NP role.

Other barriers included:

- Lack of administrative support
- Poor communication
- Lack of interest in working on a multidisciplinary team
- FPs may not want to turn cases over to NPs and have only the difficult cases
- Scheduling: NP and FP not always on site at the same time
- Lack of time
- Including learners in collaborative practice (due to time constraints)

**Mentoring and on going support**

Half (50%) of FPs felt that the mentoring had been helpful. Comments included:

- They helped in terms of taking charge, setting up meetings: they took a facilitator role
- They helped provide information
- Mentoring helped develop the structure of collaboration (e.g., medical directives, areas for follow-up)
- Mentoring helped in terms of feeling comfortable from a legal point of view
- Mentoring helped in terms of support, feeling you're not alone

The other half (50%) felt the mentoring did not facilitate collaboration. This was generally because their team was already collaborating well. One FP described experiencing a peer discussion rather than mentoring, as the mentors were at similar stage as the program participants.

Both positive and negative comments about the teleconferences emerged. One FP felt that going over case studies in the teleconferences was helpful, whereas another believed that the teleconferences were not useful and they would prefer to e-mail mentors with specific questions.

### Access to mentors

*Availability*

Most FPs (70%) found the mentors to be readily available, whereas twenty percent reported they didn't access the mentors.

*Time scheduling*

The majority (70%) were satisfied with time scheduling. Fifty percent reported that scheduling was difficult with a large group. The result was that often the full group wasn't present, and times didn't always suit participants.

*Style of mentor*

Most (80%) were satisfied with the style of mentoring. Descriptions included flexible, adaptable to the needs of participants, relaxed and informal. Twenty percent reported that it did not seem like mentoring. Again, one FP reported that they had more experience than the mentors.

### Education component of the program

Half (50%) reported that the educational component of the program was not helpful. Again, this was generally because collaboration was already established prior to the SIP program. Thirty percent found the exercises somewhat helpful. Twenty percent felt the education component helped clarify roles, expectations and areas for improvement.

Other comments included:

- It helped get discussion going
- The teleconferences were helpful
- They confirmed we were moving in the right direction

- We did the exercises at the beginning, but after that there were no more
- It might be more meaningful to do them once people had some experience working together
- "[The exercises] annoyed me, I felt like I was back in kindergarten"
- They got in the way, they weren't relevant to our needs

**Web-based support**

All of the FPs reported that they did not use the web-based support much, if at all. Comments about the web-based support included: it was difficult to use--there were technical problems (20%); there was too much information on the web site, it was confusing; and "didn't find any new information".

**Sustaining collaborative practice**

The majority of FPs (70%) reported that the structures are in place to sustain their collaborative practice. Comments related to structure included: we have medical directives in place; we have regular meetings; and we have clarified the role of NPs regarding learners and regulatory bodies.

Thirty percent reported that the structures are not in place. Comments included:

- It would be helpful if we shared patient load, referred mutually
- Developing protocols and directives would allow the NP can do more
- The ability to purchase equipment would assist collaboration
- Remuneration and support from the hospital would facilitate collaborative practice

**Successful strategies that increased collaboration and supported integration of the NP role within the practice**

Thirty percent of FPs reported that the NP partner educated the team regarding NP functioning within their scope of practice, role and/or mandate. One FP described the process: "We had to educate the other members of the team so that she could collaborate with the whole group and everyone would have the same expectations". Twenty percent mentioned understanding and defining roles in relation to the practice. One FP described the process: "We really looked at the needs of the patient population, and what her skill set and interests were... Looking at the needs of the practice and how we could help everybody do a better job".

Twenty percent reported the importance of open communication. These included:

- Being well-known to each other made communication easier
- Different modes of communication were helpful in different practices
- Importance of regular team meetings, supervision, or case-conferences
- Using problem-based, as needed, consultation
- Using fax, e-mail to collaborate was an important strategy for an off-site FP

Other strategies mentioned included:

- Staff triages to determine which patients go to the FP and which to NP
- Putting medical directives in place
- Team effort, support of Medical Advisory Committee
- Integrating NP into key departments in the hospital
- NP works independently within group, flexible to meet patient needs
- Figuring out how to share NP between multiple FPs
- Slow, progressive integration
- NP visits long-term care facility weekly, uses a communication book, coordinates care
- NP and FP do rounds at long-term care centre on different days
- We started a SGPBLG and continue to meet, FPs and NPs together

**Recommendations for supporting the future development of new collaborative teams**

Providing information and education to new teams emerged as an important theme. This included providing information on the scope of NP practice and the NP role (20%) and ensuring that information be provided early on in the process (20%). It was also recommended that:

- Information should be provided to the team, not just the collaborating FP (20%)
- The availability of a mentor or colleagues who have been through this experience was helpful
- Provide a manual with suggested protocols, medical directives, so groups could adapt them
- Train physicians and other health professionals in interdisciplinary practice model from the beginning

Interdisciplinary communication was another important theme. It was recommended that teams need to communicate early on about roles, discuss goals, how to work together to reach them and make sure the NP and FP know each other's capabilities.

Issues related to funding and government support emerged. These included:

- The Ministry of Health and Long-Term Care has to commit to prevention
- We need to know the government will support collaboration
- The funding structure should be changed so the money goes directly to NP (this would put them on equal footing with the FP partner)

Recommendations related to the setting where the practice is located included having a dedicated clinic, a setting for collaboration; the FHN set-up works very well for collaboration; and collaboration works best in a multidisciplinary setting.

Other recommendations included:

- Support teams prior to or very early in collaboration
- Provide administrative support for the NP
- Partners must want to collaborate

**Recommendations for future mentoring and support programs**

Half of FPs (50%) recommended grouping people by practice type rather than by geographic location. Comments regarding the mentoring included:

- Ensure more follow-up between mentor and mentee (for example, a regular meeting time) (20%)
- Continue the mentoring, and provide financial support to the mentors
- Provide mentors for new teams
- Ensure that the mentoring team is knowledgeable regarding legal issues
- Equip mentors to provide suggestions and documents that they could adapt to each situation

Some FPs commented on the initial conference. Overall, the recommendations were positive and included:

- Offer an initial conference again, it was helpful in terms of setting up, knowing where we were going
- Have more large-group meetings, for example, a follow-up, debriefing meeting with the whole group
- Have annual or bi-annual face-to-face meetings

One FP commented on the different needs of FPs and NPs, specifically: the FP will require more education than the NP; it is important to screen and train collaborating FP in advance to ensure they are willing to work collaboratively with NPs; and the NPs should have a say

in how the collaborating FP is chosen. Finally, one FP felt that there needed to be better communication about the goals and structure of the program.

**Other comments:**

The FPs reported the following thoughts:

- "It was good idea; I hope it will continue in the future"
- "SIP was a good idea, but difficult to fit into an already crowded schedule"
- "I wasn't expecting it to be helpful, since I had already worked with NPs, but I found it surprisingly helpful"
- "The Ministry of Health and Long-Term Care needs to remunerate FPs; physicians won't want to collaborate if they are losing money"
- "I'm not sure this is going to be a cheaper model"
- "I'm not sure about the efficiency of this model"
- "I was involved in the Ontario Medical Association's project to develop a definition of collaborative practice, and this was very helpful"
- "It helped us get medical directives in place for the NP; it helped the NP to have physician support"

### *Results for the NP/FP low participant interviews*

Due to the small number of individuals who were interviewed from the low participant group, generally the results for the NPs and FPs were combined unless there appeared to be a distinction between the NP and FP reports. For this sample, one NP response equals 9.1 % and one FP response equals 20%

**Description of NP/FP low participant interview group**

Forty-three participants were identified as having a low level of participation in the SIP program (24 NPs and 19 FPs). Of these participants, eleven NPs and five FPs agreed to an individual interview. The participants were distributed between the two groups: Group 1 (n = 13) and Group 2 (n = 2). Group 2 participants had their training through web-based

learning and teleconferences. The participants practiced in the Central (n = 4), Central 2 (n = 3), East (n = 1), North 2 (n = 3), Northwest 2 (n = 1), South (n = 2), Southwest 3 (n = 2) regions of the province.

**Overall Impressions**

Participants were asked for their general impression of the SIP program. Their general impressions included: minimally beneficial for established collaborative relationships, stimulated discussion about FP/NP collaboration, lacked understanding of FP scope of practice, and a perceived lack of benefit for FPs.

*Minimally beneficial for established collaborative relationships*

Five of the NPs and one FP (total = 37%) identified that participants received minimal benefit from the project because they were experienced practitioners working in established collaborative relationships.

*Stimulated discussion about FP/NP collaboration*

Some of the NPs (45%) and FPs (40%) had general positive comments about program. They concluded that the SIP program stimulated discussion about NP/FP collaboration issues and provided an arena to share ideas with other collaborative teams.

*Lacked understanding of FP scope of practice*

Physicians felt the facilitators [of the education and mentoring program] were not listening to physicians concerns about the NP role and thus threatening the integrity of the FP role (40%). Some FPs have the attitude that "NPs were being forced on us and that we are making the best of it". Another FP added "the family physician needs to practice within a full scope of practice, not as a mini medical internist". These FPs felt the SIP program lacked an understanding of the family physician role and should have tried to address the FP attitudes towards NPs. One NP suggested addressing FP concerns and negative attitudes about NPs directly.

**Aspects of the program that helped collaborative practice**

The majority of the NPs and FPs (87%) reported aspects of the program helped their collaborative practice. The benefits reported were: group discussions on issues common to collaboration; networking opportunities with other collaborating FPs and NPs; exercises which stimulated discussion to work towards common goals; time to develop an interpersonal relationship; the Practice Based Small Group Learning (PBSGL) modules; and access to a specific mentor, if necessary. No hindrances to collaboration were reported because of the SIP program.

**Aspects of the program that hindered collaborative practice**

The majority of the FPs interviewed (60%) made a negative statement about the project including: questioning value for financial investment of the program, expressed feelings the facilitators were "preaching to the converted" and stating the program was "work rather than help". This was confirmed by those NPs whose FP partners did not see any perceived benefit in participating in the program (18%). NPs also voiced challenges in dedicating time for the SIP program, especially for their FP partner.

**Mentoring and on-going support**

Participants were asked whether the mentorship and ongoing support assisted them in the integration of the NP position within the practice. One participant responded that the mentoring was more beneficial for NPs than FPs and expressed a need for an experienced and well functioning mentor group. Some of the NPs (36%) did not feel the mentorship and ongoing support assisted them in their integration of the NP position within the practice.

The NPs who responded positively (27%) were from Group 1. They indicated the mentoring team was a good sounding board, which provided ongoing support and was able to direct them to the appropriate resource. The majority of the NP participants had positive responses to the style of the NP/FP mentoring team, indicating that the team was experienced and had a good working relationship (73%). The NP participants connected to a mentoring team felt the team was accessible (63%), while some felt they were sometimes difficult to access (18%).

The majority of FPs did not find the mentoring helpful (60%).The remaining FPs (40%) did not access their support, but were aware of their existence. The FPs (40%) advised, in order for the mentorship to be effective, they needed the mentor to have a similar practice setting and practice style.

The negative respondents reported a lack of the FP mentor involvement in the regional groups (19%) and that the mentoring team was less experienced than the mentees (13%).

**Educational component of the program**

Participants were asked whether the collaborative practice model and exercise assisted in their collaborative efforts. The responses focused on the practice exercises, the regional teleconference and the Toronto conference.

Regarding practice exercises, the majority of the FPs (60%) and NPs (45%) made negative comments about the practice exercises, including: the exercises were repetitive, time consuming, lacked clarity and lacked practical value. Six participants indicated that the exercises stimulated discussion on collaboration between NP/FP dyads (38%). NPs (18%) recognized that the program needs to include FP focused-terminology on collaboration as FPs and NPs may have a different understanding of concepts such as independent practice and collaboration. One NP suggested a revision of the collaborative practice model to apply to collaborative relationships beyond one-on-one FP/NP dyads.

The majority of the NPs and FPs viewed the regional meeting as having limited benefits. Some of the challenges noted were a lack of structure (19%) and that the timing of the regional meetings conflicted with their other responsibilities (38%). One FP reported that "the NP mentor seemed to be frustrated ….they were having difficulty figuring out their roles as mentors".

The effectiveness of the Toronto conference had mixed reviews. The positive responses focused on the informative aspect of the program (13%), appreciation of the facilitators' enthusiasm (6%) and the networking opportunities (6%). The negative responses (13%) stated the presentations were "boring" and the conference was "a waste of time".

### Web-based support

The majority of NPs and FPs (75%) did not find the web-based support helpful. Of those who did try to access the web-based support (25%), many cited difficulties with access due to technical challenges such as: no high-speed internet access, an inability to access the web and limited dial-in lines at work.

### Facilitators to collaboration

Participants were asked which factors in their specific situation facilitated collaboration. The top three facilitators for both the NPs and FPs focused on the interpersonal relationship between the FP and NP, the organizational structure, and role clarity. The NPs identified administrative support as an additional facilitator of collaboration.

*Interpersonal relationship between FP and NP*

Interpersonal issues were identified as a key facilitator of NP/FP collaboration. The facilitators listed by the FP were: the personality of the NP, mutual respect for expertise, the FP's comfort with the NP's ability to identify limitations, and the FP's confidence in the NP's expertise and knowledge. The facilitators listed by the NPs were: the personality of the FP (63%), FP support of the NP role, being open, easy going, and approachable. Both NPs and FPs recognized an FPs' previous positive experience working with an NP as a facilitator of collaboration (25%).

*Organizational structure*

An organizational structure that promoted a collegial relationship and a team approach was the most commonly reported facilitator of collaboration for both NPs and FPs. The NP responses focused on access to a collaborative FP partner as a key facilitator of collaboration (36%) and promoting the availability of the FP for face-to-face consultations. The FPs promoted a setting where the NP and FP work in close physical proximity. The NPs identified a working environment that fostered a team approach (18%). Participants from both the FP and NP group proposed a structure, which encouraged a salary method of payment for both FP and NP (13%), and discouraged an employee/employer relationship (13%).

*Role clarity*

Both NPs and FPs identified clarity of role delineation between the NP and FP as a facilitator of collaboration. This included a clear understanding of the NP and FP roles (25%) and agreement on scope of the NP role within the current practice structure. The NPs also included: a mutual respect for skills, similar practice style, a mutual understanding of primary health care, and co-provision of patient care. The NPs added that the "NP needs a clear understanding of scope of practice" (18%).

*Administrative support*

Only the NPs identified administrative support to be a facilitator of collaboration. This included: supervisory support of the NP role (18%), access to support staff to book appointments and order supplies, access to the equipment necessary to provide primary health care services and the willingness of [tertiary care] centres to work with NPs.

**Barriers to collaboration**

Participants were also asked to suggest possible barriers to collaboration. The barriers focused on six areas: resistance from other health care providers, lack of NP role clarity alignment, liability issues, funding issues, time constraints, lack of administrative support and NP functioning within their scope of practice issues.

*Resistance from other health care providers*

Regarding resistance from other health care providers, both NP (36%) and FPs (60%) identified resistance from other physicians as a barrier to collaboration. One NP also identified the lack of support for the NP role from registered nurses (RNs).

*Lack of NP role clarity and alignment*

A common barrier to collaboration was the lack of NP role clarity among FPs, support staff and medical residents (19%). This role confusion was exemplified by the lack of alignment of both the NPs' and the FPs' perception of NP role. One NP experienced a lack of consensus between the two "collaborating" FPs as to the NP role in group practice, while the remaining FPs in the practice were resistant to the NP's arrival.

*Liability Issues*

Both NPs and FPs identified concerns among FPs about potential liability issues when working with a NP (25%). The FPs expressed liability concerns when the NP consults on patients that they have not assessed and do not know. The NPs indicated that there is a lack of FP understanding that the NP is autonomous when working within their scope of practice and is fully accountable for their own practice (27%).

*Funding issues*

FPs identified the lack of financial support for FP consultation and team based work using performance indicators as barriers to collaboration (40%). The NPs promoted salary method of reimbursement for FPs rather than a fee-for-service method of payment. They also advocated for the NP to work as an independent contractor, rather than an employee of the FP.

*Time constraints*

Both FPs and NPs recognized a lack of time to promote such collaborative practices as NP consultation, case review and role negotiation as barriers.

*Lack of administrative support*

NPs (27%) and one FP (20%) recognized a lack of administrative support and understanding of the NP role as barriers to sustaining a collaborative relationship. The NPs expanded this category to included lack of support staff and RNs who would not accept NP orders.

*NP functioning within their scope of practice issues*

Only NPs identified limitations of the NP role as set out by *The Public Hospitals Act* as a barrier, specifically referring to the prescription and lab lists (18%). An NP also identified OHIP policies on funding for referrals to specialists from non-physicians as a barrier.

**Sustaining collaborative practice**

The majority of FPs and NPs interviewed agreed that structures were in place to sustain their collaborative practice. The FPs focused on structures such as confirmed FP funding, approval as a Family Health Team, and being part of a Community Health Centre model. The FPs identified practice changes, which assist in sustaining a collaborative practice such as advocating for hospital privileges for NPs; matching each patient to a primary care provider; instituting medical directives; and promoting the development of the NP role in the community.

The NPs responses focused on a supportive collaborating FP and a low FP to NP ratio (45%). Some NPs responded that their practice was evolving due to a structural change to a Family Health Team (27%). Two respondents stated they were uncertain of their future as they were independent NPs who relied on yearly funding for their position. One NP left the practice due to a lack of resolution of collaborative practice issues.

**Successful strategies for increasing collaboration**

The participants were asked to describe successful strategies that worked to increase their collaboration and support integration of the NP role within their practice. The strategies included: early education on NP role and maintaining opportunities for continuing education, developing interpersonal relationships, and scheduling regular meetings between NP and FP.

*Early education on NP role and continuing education*

NPs encouraged the early initiation of education sessions on the NP role for FPs, RNs, support staff and administration (36%). One FP suggested the FP/NP dyad formally educate the FPs, staff, and patients on the NP's skill set and the 'added value' aspect of the role. Both NPs and FPs promoted the maintenance of continuing education opportunities such as the PBSGL modules. An NP participant advocated for the sharing of resources between the NP and FP. One NP participant indicated a need for FPs to be exposed to collaborative practice training during their medical education.

*Developing interpersonal relationships*

Fifty percent of those interviewed (NPs - 55% and FPs - 40%) recommended developing a collegial relationship between the FP and NP including developing excellent communication skills, trust and respect.

*Regular scheduled meetings between NP and FP*

Both NPs (45%) and one FP recommended regular scheduled meetings between the FP and NP.

*Commitment to work through issues*

FPs (40%) recommended that both the NP and FP make a commitment to work through issues. The NPs (18%) advocated for persistence and patience (i.e., pick your battles).

**Recommendations for future development of new collaborative teams**

The participants were asked to provide recommendations for the future development of new collaborative teams. Their recommendations included: provision of a NP/FP collaborative toolkit, support issues, regular meetings between NP and FP, and continuation of the mentorship program

*Provision of a collaboration toolkit*

Thirty-one percent of NPs and FPs combined (NP = 27%, FPs = 40%) advocated for the development and provision of collaboration tools to assist in the development of new NP roles. This toolkit could assist in addressing topics such as: role definition and clarification, communication processes, medical directives and liability issues. One NP recognized the need for a community information package/toolkit, which would assist communities in assessing community needs and defining the model of care and combination of practitioners required to meet those needs.

*Support issues*

The NPs (18%) encouraged new collaborative teams to ensure all FPs in the practice support the NP position before a position is approved and funded. NPs (18%) also recommended the provision of an electronic program to facilitate the more efficient collection of statistics to meet the MOHLTC reporting requirements.

*Regular meetings between NP and FP*

The NPs advocated for setting aside protected time for regular meetings and consultation between the NP and FP (18%).

*Continuation of the mentorship program*

Some of the NPs (18%) recommended the continuation of the mentorship program for new collaborative teams.

**Recommendations for future mentoring and support programs**

The participants were asked to provide recommendations for future mentoring and support programs. The recommendations focused on: grouping by similar practice style and practice setting, a better screening process, developing a formal collaboration network, focusing on new collaborative teams/those asking for help, and changing the regional group structure.

*Group by similar practice style and practice setting*

A common theme between NPs (55%) and FPs (100%) was the need for future mentoring programs to be grouped by similar practice type rather than geographic area (combined = 69%).

*Better screening process*

Both FPs and NPs (38%) wanted more information on the SIP program upfront to ensure a better understanding and willingness to be part of the program. They advocated for a screening process with clear criteria to ensure the appropriateness of potential mentee and mentor participants. The FPs (40%) advocated for the program to be more inclusive in their invitation to participate. These FPs noted only "one of the three NPs they worked with were invited" and the "RN should have been included in the SIP program".

*Formal collaboration network*

The NP participants promoted a formalized collaboration network for resource sharing and addressing administrative issues (36%). A FP suggested a final meeting to discuss

successes and challenges. Another FP advocated for more group problem solving and sharing of resources. This could include an annual meeting where groups outline their successes, challenges and share resources.

*Change regional group structure*

The NPs encouraged smaller regional groups (18%). They supported designated meeting times (45%) with a structured agenda of needs identified by the members such as: medical directive templates, advocating for hospital privileges, resistance from other providers, liability concerns, etc.

### *Results of the MOHLTC Performance Reports*

The Performance Report is a MOHLTC checklist comprised of the number of NP/patient encounters as well as the specific professional activities accomplished by the NPs during their shifts. It contains six sections, each having several items: patient encounter (4 items), disease prevention strategies with immunization (10 items) and screening (17 items), curative care: diagnosis and treatment (6 items), rehabilitative care (6 items), supportive care (5 items) and consultations/referrals (11 items).

As part of their daily work, nurses are asked to give an account on their encounters with patients and professional activities by checking each appropriate item on the performance report, as it happens. Individual reports are then sent to MOHLTC, which, in turn, calculates the data for each practice setting for every 3-month period. Although not intended as a measure for the SIP program, performance reports were used to provide proxy data relative to NPs' role integration and collaborative activity. Therefore, role integration was defined by the number of curative and rehabilitative care because these two categories were believed to reflect more fully the extended role of the nurse practitioners, whereas the prevention strategies and the supportive care, although central to the NP role, were considered more consistent with the general nursing practice. Collaborative activity was measured by the number of consultations NPs had with their FP partner and other health care professionals and the number of referrals to and from NPs.

The final sample size was 52 NPs with 38 having participated in the SIP training program. Table 43 shows the means and standard deviations (SD) for the categories according to each quarter (Q1 to Q4).

In relation to service delivery, the data indicated that the majority of patient encounters occurred in the clinic during regular hours. However, it is worth noting that during this time period, encounters on the phone almost quadrupled. The data also shows that during the first three quarters, the highest proportion of activities performed by the NPs was prevention strategies (38%, 33% and 29% respectively), but that this pattern changed in the final quarter where the highest proportion of NP activities was directed toward supportive care (32%) and curative care (28%). The smallest proportion of nursing activities was rehabilitative care (respectively 15%, 17%, 18%, and 15%). Finally, these statistics revealed that collaboration was much stronger between the NPs and their FP partner than with any other professionals identified in the list, namely the rehabilitation professionals, the social workers, the dieticians, the mental health professionals, the emergency department and "others".

**Table 43: Descriptive statistics of the MOHLTC Performance reports by categories and quarters**

| | Means (SD) | | | |
|---|---|---|---|---|
| **Category** | **Q1** | **Q2** | **Q3** | **Q4** |
| Patient encounters | | | | |
| Encounters in the clinic/regular hours | 334 (298) | 343 (239) | 377 (229) | 410 (235) |
| Encounters on call or extended hours | 10 (35) | 7 (16) | 14 (38) | 18 (45) |
| Encounters out of clinic | 7 (29) | 20 (45) | 23 (49) | 29 (65) |
| Encounters by phone > 5 minutes | 16 (31) | 36 (53) | 56 (127) | 59 (75) |
| Care activities | | | | |
| Prevention strategies | 167 (240) | 222 (248) | 258 (308) | 241 (280) |

| | Means (SD) | | | |
|---|---|---|---|---|
| Curative Care | 108 (184) | 164 (164) | 216 (199) | 286 (263) |
| Rehabilitative Care | 67 (138) | 114 (149) | 162 (172) | 156 (154) |
| Supportive Care | 101 (209) | 169 (250) | 249 (322) | 322 (331) |
| Consult/referrals | | | | |
| Consultations with GP/FP | 41 (71) | 49 (77) | 56 (75) | 50 (55) |
| Referrals from GP/FP | 28 (99) | 16 (29) | 17 (44) | 20 (53) |
| Referrals from others | 9 (22) | 8 (22) | 7 (28) | 7 (31) |
| Referrals to GP/FP | 12 (21) | 28 (110) | 16 (36) | 12 (19) |
| Referrals to other MDs | 8 (25) | 8 (11) | 16 (25) | 18 (29) |
| Referral to others | 35 | 33 | 14 | 20 |

Note: N = 51

The performance reports were analyzed to respond to the two following questions: a) Is there a difference in the SIP group activities over time regarding their role integration and collaborative activity? b) Is there a difference between the NPs participating in SIP and those who did not as of March 2005 on the changes observed on these same two variables? It was hypothesized that between April 2004 and March 2005, participating NPs would perform more curative and rehabilitative care activities (as measures of increased function within the NP scope of practice and thus integration). They would receive more referrals from FPs and other health professionals and have fewer consultations with FPs (as a measure of collaboration). It was also hypothesized that participating NPs would see a larger increase in role integration and collaborative activity than the nurses who did not take part in the SIP program. Repeated-measures analysis of variance was used to examine differences in the variables across the four time periods.

### Increased role integration

Table 44 shows that the mean number encounters for curative and rehabilitative care steadily and substantially increased throughout the year. Curative care includes diagnosis and treatment activities with regard to acute/episodic minor illness, acute/episodic minor injury, acute/complex major illness, major injury, follow-up on abnormal findings and other curative procedures. Rehabilitative care refers to the initial visit for or the adjustment of treatment of a chronic disease, monitoring of a stable chronic disease, and ongoing care for an injury or a disability.

The repeated-measures analysis of variance (RM-ANOVA) showed statistically significant increases in both curative and rehabilitative care for SIP NPs. Furthermore, in order to grasp if this increase was only indicative of the augmentation of NPs overall activities, ratios of curative care and rehabilitative care relative to the total number of patient encounters were calculated. As shown in Table 44, the curative care ratio increased at a significant level whereas the rehabilitative care ratio did not, suggesting that throughout the year, SIP nurses saw a shift in their practice towards more curative care.

**Table 44: Curative and Rehabilitative Activities of SIP NPs over time**

| | Curative Care Mean (SD) | Curative Ratio | Rehab Care Mean (SD) | Rehab Ratio |
|---|---|---|---|---|
| 1st quarter | 108 (184) | 0.34 | 67 (138) | 0.24 |
| 2nd quarter | 164 (164) | 0.41 | 114 (149) | 0.30 |
| 3rd quarter | 216 (199) | 0.47 | 162 (172) | 0.36 |
| 4th quarter | 286 (263) | 0.56 | 156 (154) | 0.31 |
| Significance level | $p<0.001$ | $p=0.01$ | $p<0.001$ | $p>0.05$ |

**Note: N = 37**

### Collaborative activity

Results indicate a variation in collaborative activity among SIP nurses. As Table 45 shows, the mean number of consultations that NPs had with FPs increased during the first three quarters and reverted back to the level of the first quarter at the end of the year. Although low, the mean number of patients that NPs referred to FPs steadily increased throughout the year whereas the referrals to other medical professionals remained fairly constant, with the

total number of referrals slightly decreasing. However, it is important to emphasize that these changes were not statistically significant. Nevertheless, when examining the total number of referrals made by the NPs to physicians and other health professionals, while taking into account the number of patient encounters, findings indicate a significant decrease over time.

**Table 45: Consultations with FPs and referrals to health professionals over time**

| | Consults with FPs Mean (SD) | Referrals to FPs Mean (SD) | Referrals to other MDs Mean (SD) | Total referrals Mean (SD) | Total ratio referrals |
|---|---|---|---|---|---|
| 1st quarter | 48 (79) | 10 (18) | 9 (29) | 38 (73) | 0.14 |
| 2nd quarter | 57 (87) | 15 (23) | 7 (8) | 32 (68) | 0.11 |
| 3rd quarter | 60 (86) | 18 (41) | 11 (14) | 21 (24) | 0.08 |
| 4th quarter | 49 (63) | 19 (17) | 13 (17) | 30 (47) | 0.08 |
| Significance level | $p$>0.05 | $p$>0.05 | $p$>0.05 | $p$>0.05 | $p$=0.01 |

Note: N = 38

As for the referrals made to the NPs, Table 46 shows that there was a slight but steady increase from the FPs, while the other professionals maintained a consistent pattern of collaboration with the NPs. Once again, although increasing, the number of referrals made to NPs by FPs was not statistically significant across time.

**Table 46: Referrals to SIP NPs over time**

| | Referrals from FP Mean (SD) | Referrals from others Mean (SD) |
|---|---|---|
| 1st quarter | 14 (28) | 10 (24) |
| 2nd quarter | 16 (31) | 7 (23) |
| 3rd quarter | 17 (47) | 8 (33) |
| 4th quarter | 22 (60) | 8 (36) |
| Significance level | $p$>0.05 | $p$>0.05 |

Note: N = 38

**Differences between SIP and NonSIP NPs**

To identify if there were differences in role integration and collaborative activity over time between NPs who participated in SIP and those who did not (NonSIP), repeated-measures analysis of variance were conducted using the quarters and the groups as factors. Significant interactions (F statistic) would indicate that a change over time differed between the two groups.

**Table 47: Comparison of SIP and NonSIP groups on the increase of total patient encounters**

| | Patient encounters | Patient encounters |
|---|---|---|
| | **SIP**<br>**Mean (SD)** | **NonSIP**<br>**Mean (SD)** |
| 1st quarter | 334 (272) | 457(428) |
| 2nd quarter | 414 (205) | 385 (344) |
| 3rd quarter | 445 (202) | 537 (404) |
| 4th quarter | 508 (202) | 533 (404) |
| F | 0.29 | |
| *p* value | 0.595 | |

Note: SIP (N = 38); NonSIP (N = 14)

Although the net increase in patient encounters over time is larger among SIP NPs (+174) than NonSIP NPs (+76), the difference between the two groups is not statistically significant ($F=0.29$, $p > .05$) (Table 47). Similarly, as indicated in Table 48, the increase observed in the performance of curative and rehabilitative care, which reflects increased role integration, is comparable between the two groups.

**Table 48: Comparison of SIP and NonSIP groups on curative and rehabilitative care**

| | Curative | Curative | Rehabilitative | Rehabilitative |
|---|---|---|---|---|
| | **SIP**<br>**Mean (SD)** | **NonSIP**<br>**Mean (SD)** | **SIP**<br>**Mean (SD)** | **NonSIP**<br>**Mean (SD)** |
| 1st quarter | 111 (165) | 101 (233) | 64 (137) | 76 (143) |
| 2nd quarter | 171 (142) | 146 (217) | 123 (161) | 92 (113) |
| 3rd quarter | 209 (192) | 234 (221) | 154 (168) | 182 (185) |
| 4th quarter | 258 (216) | 358 (357) | 149 (146) | 176 (175) |
| F | 1.24 | | 0.16 | |
| *p* value | 0.272 | | 0.688 | |

Note: SIP (N = 38); NonSip (N = 14)

The same analysis was then conducted on the prevention and supportive care activities and results indicate no significant differences in these two categories across groups (Table 49). However, when the number of patient encounters is considered, there is a larger increase in supportive activities among NonSIP NPs ($p$ = 0.03).

**Table 49: Comparison of SIP and NonSIP groups on preventive and supportive care**

| | Prevention | Prevention | Supportive | Supportive |
|---|---|---|---|---|
| | SIP<br>Mean (SD) | NonSIP<br>Mean (SD) | SIP<br>Mean (SD) | NonSIP<br>Mean (SD) |
| 1st quarter | 130 (181) | 266 (342) | 87 (137) | 141 (340) |
| 2nd quarter | 197 (240) | 289 (266) | 153 (180) | 214 (386) |
| 3rd quarter | 221 (274) | 356 (378) | 210 (241) | 356 (473) |
| 4th quarter | 202 (211) | 344 (404) | 241 (227) | 422 (505) |
| F | 2.69 | | 1.785 | |
| *p* value | 0.107 | | 0.188 | |

Note: SIP (N = 38); NonSip (N = 14)

Finally, all the analyses on the different components of collaboration activity did not show interaction effects; hence suggesting that collaborative activity did not differ between the two groups (Tables 50-52).

**Table 50: Comparison of SIP and NonSIP groups on consultations and referrals to FPs**

| | Consultation | Consultation | Referral to FPs | Referral to FPs |
|---|---|---|---|---|
| | SIP<br>Mean (SD) | NonSIP<br>Mean (SD) | SIP<br>Mean (SD) | NonSIP<br>Mean (SD) |
| 1st quarter | 48 (79) | 21 (35) | 10(18) | 16 (26) |
| 2nd quarter | 57 (87) | 27 (30) | N/A | N/A |
| 3rd quarter | 60 (86) | 43 (34) | 18 (41) | 9 (14) |
| 4th quarter | 49 (216) | 56 (54) | 10 (17) | 17 (23) |
| *p* value | ns | | ns | |

Note: SIP (N = 38); NonSip (N = 14)

**Table 51: Comparison of SIP and NonSIP groups on referrals to other medical professionals and total number of referrals**

| | Refer to MDs | Refer to MDs | Total Referrals | Total Referrals |
|---|---|---|---|---|
| | SIP<br>Mean (SD) | NonSIP<br>Mean (SD) | SIP<br>Mean (SD) | NonSIP<br>Mean (SD) |
| 1st quarter | 9 (29) | 8 (13) | 38(73) | 62 (93) |
| 2nd quarter | 7 (8) | 10 (17) | 33 (68) | 62(104) |
| 3rd quarter | 11 (14) | 28 (41) | 22 (24) | 54 (62) |
| 4th quarter | 13 (178) | 30 (45) | 30 (47) | 58 (77) |
| *p* value | ns | | ns | |

Note: SIP (N = 38); NonSip (N = 14)

**Table 52: Comparison of SIP and NonSIP groups on referrals they received from medical professionals and total number of referrals**

| | Refer from FP | Refer from FP | Total Referrals from others | Total Referrals from others |
|---|---|---|---|---|
| | SIP<br>Mean (SD) | NonSIP<br>Mean (SD) | SIP<br>Mean (SD) | NonSIP<br>Mean (SD) |
| 1st quarter | N/A | N/A | 10 (24) | 6 (13) |
| 2nd quarter | 16 (31) | 16 (24) | 7 (23) | 8 (19) |
| 3rd quarter | 17 (47) | 15 (37) | 8 (32) | 6 (9) |
| 4th quarter | 22 (60) | 14 (27) | 8 (36) | 3 (6) |
| *p* value | ns | | ns | |

Note: SIP (N = 38); NonSip (N = 14)

Overall, findings suggest that SIP nurses performed significantly more curative, and rehabilitative care activities over the year and made significantly less referrals when considering the total number of patient encounters. However, these changes were not statistically different from NPs who did not participate in SIP program. Yet, relative to the number of patient encounters, nonSIP nurses had a larger increase in supportive care than did SIP nurses.

## SUMMARY AND CONCLUSIONS

The mixed method of analysis (quantitative and qualitative data) provided the opportunity to examine and compare different and complementary aspects of the SIP program. The surveys provided information from NPs and FPs about their practice environment, their assessment of the collaborative relationship, and their appraisal of barriers and facilitators to practice. By collecting data before and after the program, the survey data was able to examine change as the collaborative relationships evolved. The interviews also asked about facilitators and barriers to collaboration as well as overall impressions of specific aspects of the program (mentoring, educational components, model and exercises), successful strategies for collaboration and recommendations for future practice. The MOHLTC performance data, which comprised of quarterly assessments of the scope and type of NP activities throughout the program, allowed for a comparison with the NP role survey data.

**Summary of the quantitative survey analyses**

The pre and post program surveys provided a one-year snapshot of how the NPs and FPs viewed their collaborative efforts and the effect of the educational and mentoring program.

Forty-seven percent of the NPs, who completed both surveys, indicated that they were involved in developing the proposal for the NP position and over 70% took part in developing their job description. This may explain why 67% of the NPs felt their role was clearly defined (both before and after the program). Of the 14 FPs who completed the collaborative survey, 50% were involved in the proposal development and 64% took part in helping to develop the NPs job description. However, only 29% of the FPs reported that there was orientation for themselves or for the health care team prior to the arrival of the NP.

*NP role integration*

Prior to the collaborative program, the FPs rated the top service provided by the NP as shared between “monitoring chronic illness” and “wellness care/health promotion”. One year later, the top services provided by the NPs changed, according to the FPs, to include both “minor acute illness” and “wellness care/health promotion”. According to the NPs, they spent most of their time in two treatment service areas: wellness care/health promotion

(30% before, 30% after) and in the care of minor acute illness (27% before, 24% after). Monitoring chronic illness ranked third at 19% before and 22% after the program. Significant differences were noted by the NPs regarding functioning within their full scope of practice following the program. They reported significant increases in treating major acute illness and in their linkages to community; however, this change was not reported by the FPs. Another important finding associated with the NPs' scope of practice functioning was the increased number of patients who considered the NP their primary provider, changing significantly from 38% to 55% over the year.

*Degree and satisfaction with collaboration*

The degree of collaboration was measured using the Collaborative Practice Questionnaire (Jones and Way Collaboration scale). This scale looked at issues such as planning, shared responsibility, communication, cooperation, consideration of medical concerns, patient care plans, trust, respect, and shared decision-making. All responses for both NPs and FPs fell within the "agree" to "strongly agree" categories. Overall, the NPs tended to more strongly agree with the statements about current collaboration. As well, following the program, the NPs reported higher agreement for all nine statements. The FPs also responded with higher agreement following the program for six of the nine statements, excluding: cooperate in making decisions about patient care (slightly less agreement); plan together to make decisions about the care of patients; and, communicate openly as decisions are made about patient care. However, an analysis of variance did not show significant differences either between NPs and FPs or for the groups before and after the program.

The Collaborative Practice Questionnaire (Jones and Way Satisfaction scale) also asked participants to measure their satisfaction with their degree of collaboration. Based on this scale, changes in NP satisfaction levels before and after the program were identified. Following the program, the NPs and FPs reported equal or greater satisfaction for all items following the program (i.e., "satisfied" to "highly satisfied"). Differences were also noted between the NPs and FPs. Following the program, the NPs reported higher satisfaction compared to the FPs for shared responsibility, consideration of both nursing and medical concerns, shared planning, the amount of collaboration, and the decision-making process regarding patient care. FPs on the other hand, reported higher levels of satisfaction for the level of open communication, cooperation, respect and trust for one another's knowledge and skills.

According to the FPs, there were several benefits resulting from working with NPs. Although the FPs "somewhat agreed" with the NPs reducing their workload, the remaining factors fell into the "strongly agree" category. This included: 1) applying knowledge and expertise in linking patients with community resources; 2) focusing time and expertise on community education about health promotion; 3) allows physicians to focus their skills in the care of more acute or complex patient problems; 4) allows patients increased access to services; 5) NPs can focus time and expertise on specific patient populations; and, 6) NPs can focus time and expertise on patient education about health problem prevention and treatment. The only factor which changed categories before and after the program was "allows the practice setting to increase their patient population" moving from "somewhat agree" to "strongly agree", however, this change was not statistically significant.

*Facilitators to collaboration for NP integration*

When asked to identify facilitators to collaboration, NPs and FPs focused on different areas. The highest rated facilitator for the NPs, both before and after the program, was "degree of acceptance of their role from patients". Generally, most of the facilitators identified by the NPs related to relational issues, their sense of preparedness to their role and their acceptance within their practice and community. For example, work experience prior to entering the NP program and level of confidence were both highly rated facilitators to their practice (83%). Other facilitators identified by the majority of NPs included: degree of acceptance of my role from the physician I work with; the nature of my employment relationship; personality and philosophy of physician; practice model under which I operate; orientation of the health care team to my role; my education preparation through the NP program; working relationship with other providers; and degree of acceptance of my role from the community.

The facilitators for collaboration for the FPs related to working conditions and the knowledge and expertise of the NP. These included: how the working relationship between the NP and FP was structured; acceptance of the NP role by patients; co-workers' understanding of the NP role; NP knowledge and skill to work within their full scope of practice; how long the FP and NP have been working together; the nature of the NP employment relationship; and, confidence of the NP. Following the program, the FPs also added expertise of the NP as an important facilitator.

*Barriers to collaboration for NP integration*

While the facilitators to practice as defined by the NPs centered on relational and competency issues, the identified barriers focused on legislative and regulatory issues such as the Public Hospitals Act and limited prescriptive authority for NPs, as well as provincial health policies. Following the program, policy issues related to funding (health care financing, funding for NP related activities and available administrative support) were added to the legislative and regulatory barriers.

The majority of the identified barriers to collaboration for the FPs focused on issues associated with the NP/FP working situation. Specifically, FPs identified: how the working relationship is structured; the nature of the NP employment relationship; and, co-workers lack of understanding/acceptance of the NP role as the major barriers. Following the program, regulated drug and laboratory lists were reported by 60% of the sample as an additional barrier

*Contextual and personal factors influencing collaboration*

Chi square analyses, correlations and multiple linear regressions were performed to examine whether collaboration worked better for some than others based on contextual or personal factors. Clearly defined roles were shown to be an important contextual factor. Those NPs who had clearly defined roles were more likely to function within their full scope of practice. Other external factors such as type of practice, type of patients seen, where the FP was located or previous experience with collaboration did not impact on the NPs' ability to function within their full scope of practice.

Personal characteristics of the NP, specifically age and number of years nursing, were shown to influence their satisfaction with their position. Older NPs had higher perceived status in the community, a better sense of ability to deliver quality care, greater interdisciplinary interactions and were happier with their benefits package. As well, the more years of nursing also showed a significant relationship with the NPs' perception of their ability to deliver quality care and satisfaction with their benefits package. More years nursing also resulted in fewer patients seen per day by the NP. Interestingly, neither the age of the NP, the number of months as an NP nor the number of years nursing had an impact on the type of service provided (e.g., caring for: major acute illness, minor acute illness, wellness/health promotion, chronic illness or palliative patients); whether the NP felt they

functioned within their full scope of practice or their ability to deliver care in the way they wished. Personal characteristics also influenced satisfaction levels for the NPs. The greater number of years working as a licensed NP, the more satisfied the NP was with their working relationship.

NPs who reported higher satisfaction scores also reported a greater percentage of time monitoring chronic illness, however, greater collaborative efforts were associated with more time spent caring for patients with minor acute illnesses. In relation to working conditions, higher collaborative scores for the NPs were also significantly associated with fewer patients seen per day, the percentage of patients for whom the NP is the primary provider and whether the NP is able to deliver care in the manner that she/he prefers.

For the FP's, the longer their medical experience, the more satisfied they were with the NP and the higher their reported collaboration scores. As well, the better the FP could access the services of the NP and when the cost of having the NP wasn't too high, the FPs were more satisfied and believed the collaboration was working well. The amount of physician time required to support the NP was also significantly related to: the FPs report on whether the NP appropriately consults with him/her; the physician's ability to access the services of the NP; and the length of time the NP spends completing documentation.

The FPs also reported that the length of time that the NP spends with patients was significantly associated with: the patients' increased access to services; the better the NP can apply knowledge and expertise in linking patients to community resources; and, the greater the time that the NP can focus on community education and health promotion.

In relation to working conditions for the FPs, they were more satisfied with the NP/FP relationship when the NP reduced the physician's workload, when the FP was able to access the services of the NP, and when the NP consulted appropriately with the FP.

However, working conditions did not significantly influence how the FP rated the level of collaboration. Specifically, physician workload reduction, the opportunity for the physician to focus their skills in the care of more acute/complex patient problems, the NP influence on whether the practice setting increases the patient population, the NP influence on increased access to services for the patients, the physician's ability to access the services of the NP,

the length of time the NP spends with patients and the quality of care provided by the NP did not predict the FPs measure of NP/FP collaboration.

**Summary of the interview data**

*Overall impressions of the program*

Generally, 37-45% of all groups [high participant NPs (HNPs), high participant FPs (HFPs), and low participants (LPs)] reported positive impressions about the program. Interestingly, more of the low participants reported positive statements than the high participant group. Just fewer than 40% of the low participants interviewed reported that they were already collaborating well and the program was not needed. The HNPs reported more specific benefits such as information sharing and advantages of the education components. Alternately, HFPs focused on the benefits of the initial orientation meeting. Although the LPs reported more positive benefits to the program, they indicated that the regional meetings were not useful and that the material did not address the needs and role of the FPs to the degree that they would have wished. As well, two of the low participating FPs (LFPs) felt that the program did not address their anxiety regarding their role in the partnership.

*Specific aspects of the SIP program that helped collaborative practice*

The specific aspects of the program included the exercises, mentoring, teleconferences, regional meetings and the initial orientation meeting. The exercises received the most positive comments. Forty-three percent of the HNPs, 30% of the HFPs and 38% of the low NPs (LNPs) found the exercises helped to clarify roles and sparked discussions. Around 20-30% of the high participants reported that the mentoring and teleconferences helped their collaborative practice. The HFPs, however, appeared to get more use from the face-to-face meetings.

*Specific aspects of the SIP program that hindered collaborative practice*

The HFPs and the LPs did not report any hindrances of the program to their collaborative practice. Twenty-three percent of the HNPs reported that lack of support from their partners hindered the development of the collaborative relationships and 13% found the paperwork too onerous. As well, HNPs (7%) identified that the geographical groupings for mentor groups was a problem, a finding expressed throughout the evaluation.

*Factors that facilitated collaboration*

There was a clear distinction between the HNPs and the HFPs in relation those factors that facilitated collaboration. The HNPs focused on collaborative practices such as openness to collaboration, mutual trust/respect, clearly defined roles, a shared vision of care, a personal or compatible relationship, communication with other health care providers, support from the practice setting and easy access to the FP. The HFPs, on the other hand, identified factors associated with their working conditions; such as having the partner on site, sharing patient rosters, easy access to the NP, whether an NP was needed in the practice, the patient's attitude toward the NP, having regular meetings and the ability of the NP to be helpful to the practice.

Interestingly, the LPs, the majority of who reported already having successful collaborative partnerships, identified many of the same relational facilitators as the HNPs, with the only common factor with the HFPs being easy access to their partner. The most frequently reported facilitator by the LPs was a compatible or personal relationship with their partner, followed by the NPs' experience or a previous collaborative partnership. LPs also identified clearly defined goals, mutual respect and trust, a team approach to collaboration, a clear understanding of the NP scope of practice and support from the practice as important facilitators.

*Barriers to collaboration*

In relation to the type of barriers to collaboration, once again, the responses of the HNPs and the LPs were more similar to each other, and both were different from the HFPs. The barriers most reported by the HNPs centred on the FP (lack of buy-in, financial disincentives, time constraints, being off-site, concerns about liability and infringement on the FP role). The HNPs also identified their limited prescriptive authority and lack of support by other health care professionals outside of the practice as barriers.

Similarly, the LPs (mainly FPs) reported a lack of support by other health care professionals outside the practice, a lack of understanding about the NPs role, FP financial disincentives, FP time constraints, a lack of administrative support and concerns about liability as barriers to collaboration.

For the HFPs, the only common barrier with the HNPs was having the FP off-site. They also reported a lack of understanding about the NP role, insufficient funding for NP overhead costs and conflict when changing an established practice by bring in an NP as barriers.

*Mentoring and on-going support*

The majority of the HNPs, half of the HFPs and 27% of the LNPs reported positive comments about the mentoring and on-going support. Specifically, the HNPs reported that the mentoring helped to integrate the NP role within the practice and provided helpful information and emotional support.

Half of the HFPs, 36% of the LNPs and 60% of the LFPs felt that the mentoring and ongoing support was not helpful. Inexperience of the mentors was mentioned by 13% of the HNPs and LFPs. Once again, having mentors in the same type of practice was mentioned by 40% of the LFPs. As well, 19% of the LFPs found that not having an FP mentor in the regional group was a hindrance.

However, the majority of the high participants (both NPs and FPs) felt that the mentors were accessible, their mentoring styles were helpful and they provided flexible time scheduling. The LPs reported that the mentors were accessible and their mentoring styles were helpful but would have benefited from mentors and NP/FP groups coming from similar practice settings.

*Collaborative practice model and exercises*

Twenty percent of the HNPs believed that the collaborative practice model and exercises were excellent and a further 17% HNPs and 30% of the HFPs reporting that they were somewhat helpful. For 23% of the HNPs, 20% of the HFPs and 38% of the LNPs, the exercises were helpful for clarifying issues related to collaboration. Fifty percent of the HFPs, 45% of the LNPs and 60% of the LFPs reported that the exercises were not helpful due to established relationships. A small percentage of HNPs and LNPs reported that the PBSGL modules were helpful.

*Web-based support*

All of the HFPs and three quarters of the HNPs and LPs reported that they did not get benefit from the web-based support or used it very little. Comments included that it was too time consuming, frustrating or there were too many technical problems.

*Sustaining collaborative practice*

The majority of all groups indicated that structures are now in place to sustain collaborative practice. Thirty percent of the HNPs believe that a good foundation has been set but more work needs to be done; whereas, 30% of the HFPs report that structures are not in place to sustain collaborative practice.

*Successful strategies*

The HNPs provided most of the recommendations for successful strategies. They recommended procedural strategies such as having regular meeting, educating others about the role and functioning within their full scope of practice of the NP, developing roles, policies/procedures and written directives early on in the collaboration, having a formal system in place to review cases and using the fax and phone for communication when necessary. They also recommend team decision making methods and having patience as collaboration takes time to establish.

The HFPs recommended educating others about the role and full scope of practice of the NP, defining roles in relation to the needs of the practice and having open communication.

The LNPs recommendations focused on relationship building and conflict resolution type strategies. They recommended developing a collegial relationship between the NP and FP, a supportive FP and a low FP/NP ratio, a commitment to work through issues and open communication. They also recommended having regular meetings, developing roles, policies/procedures and written directives early on in the collaboration and using the PBSGL modules.

*Recommendations for future collaborative teams*

HFPs recommend that future collaborative teams focus on increasing the awareness of the NP role and provide the NP role information early in the process. HNPs also agree with increasing awareness of the NP role, as well as changing the fee structure of FPs to

incorporate consultation with NPs, using models of agreements that have been effective and having regular meetings. The LFPs suggested the development of collaborative toolkits.

*Recommendations for future mentoring and support programs*

The interview participants had additional recommendations for future mentoring and support programs. The main recommendation by all participants was to assign groups by practice type instead of geographically. Both HNPs and LNPs recommended that expectations for participants and roles for mentors should be clear from the beginning. HNPs also recommended ensuring that participants are new to collaborative practice and/or interested in participating, a recommendation shared by the LPs. HNPs also supported the role of mentors but suggested that they be more experienced.

Regarding the method of interaction, HNPs suggested using teleconferences whereas the HFPs and LNPs recommended regular meetings. LNPs also recommended organizing structured regional meetings, developing a formal collaborative network and developing a program to facilitate MOHLTC data collection of NP activities.

Table 53 presents the similarities and disparities in responses between the high NPs (HNPs), high FPs (HFPs), low NPs (LNPs) and low FPs (LFPs) participants. In some cases, the low participant responses are combined.

**Table 53. Summary of Interview Data**

| | High NPs (n=30) | High FPs (n=10) | Low NPs (n=11) | Low FPs (n=5) |
|---|---|---|---|---|
| **Overall impressions of SIP program** | | | | |
| A. Generally positive | 37% | 40% | 45% | 40% |
| B. Information sharing positive | 23% | | | |
| C. Education component helpful | 7-10% | | | |
| D. Initial meeting helpful | | 20% | | |
| E. Did not meet needs-already collaborating | 30% | 20% | 37% | |
| F. FP anxiety about their role | | | | 40% |

| | High NPs (n=30) | High FPs (n=10) | Low NPs (n=11) | Low FPs (n=5) |
|---|---|---|---|---|
| G. Lack of benefit for FP | | | 18% | |
| H. Regional meeting not beneficial | | | 19% | |
| I. Initial meeting not helpful | | | 13% | |
| | | | | |
| **Did SIP help collaborative practice?** | | | | |
| A. Education/exercises sparked discussions. Helped clarify roles | 43% | 30% | 38% | |
| B. Mentoring helpful | 23% | 20% | | |
| C. Teleconferences helpful | 20% | 30% | | |
| D. Networking meetings helpful | 13% | 40% | | |
| E. Initial meeting helped clarify roles | | 30% | | |
| F. Overall positive response | | | 87% | |
| G. Discussion of barriers helped | 20% | | | |
| H. No impact on collaborative practice | 20% | | | |
| | | | | |
| **Did SIP hinder collaborative practice?** | | | | |
| A. Paperwork too onerous | 13% | | | |
| B. Different setting types not applicable | 7% | | | |
| C. No hindrances | 57% | 60% | | |
| | | | | |
| **Factors that facilitated collaboration** | | | | |
| A. Openness to collaboration | 47% | | | |

| | High NPs (n=30) | High FPs (n=10) | Low NPs (n=11) | Low FPs (n=5) |
|---|---|---|---|---|
| B. Clearly defined roles | 27% | | 25% | |
| C. Mutual trust/respect | 30% | | 12% | |
| D. Personal relationship/compatible | 20% | | 44% | |
| E. Shared vision of care | 17% | | | |
| F. NP experience with FP or previous collaboration | 20% | | 25% | |
| G. Communication between HCPs | 27% | | | |
| H. Easy access to collaborating partner | 30% | 20% | 36% | |
| I. Support from practice setting | 13% | | 18% | |
| J. Financial support for FP | 10% | | 13% | |
| H. Having partner on-site | | 50% | | |
| L. Acknowledgement of NP scope of practice | 13% | | | |
| M. Sharing patient rosters | | 30% | | |
| N. Role of NP needed in practice | | 20% | | |
| O. Experience/abilities of NP | | 20% | | |
| P. Patient’s positive attitude toward NP | | 20% | | |
| Q. Regular team meetings | | 20% | | |
| R. Confidence in NPs’ abilities | | 20% | | |
| S. Access to each other’s charts | | 20% | | |
| T. Team approach of practice | | | 18% | |
| U. NP has a clear understanding of their scope of practice | | | 18% | |
| V. Personality of FP | | | 63% | |
| | | | | |
| **Barriers to collaboration** | | | | |

| | High NPs (n=30) | High FPs (n=10) | Low NPs (n=11) | Low FPs (n=5) |
|---|---|---|---|---|
| A. Lack of FP buy-in | 33% | | | |
| B. Having FP off-site | 20% | 30% | | |
| C. FP financial disincentives | 33% | | 13% | 40% |
| D. NP limited prescriptive authority | 20% | | 18% | |
| E. FP time constraints | 27% | | 31% | |
| F. Concerns about liability | 13% | | 25% | |
| G. FP concerns about "territory" | 10% | | | |
| H. Lack of support outside practice | 10% | | 36% | 60% |
| I. Lack of understanding about NP role | | 20% | 19% | |
| J. Insufficient funding for NP overhead costs | | 20% | | |
| K. Changing structure of established practice | | 20% | | |
| L. Lack of understanding about NPs scope of practice within practice | | | 27% | |
| M. Lack of administrative support | | | 27% | 20% |
| N. Employment relationship of NP | | | 13% | |
| | | | | |
| **Mentoring and ongoing support** | | | | |
| A. Positive comments | 70% | 50% | 27% | |
| B. Helped to integrate NP role within practice | 37% | | | |
| C. Information sharing helpful | 50% | | | |
| D. Emotional support helpful | 13% | | | |

| | High NPs (n=30) | High FPs (n=10) | Low NPs (n=11) | Low FPs (n=5) |
|---|---|---|---|---|
| E. Mentors were accessible | 83% | 70% | 63% | |
| F. Mentors' time flexible | 70% | 70% | | |
| G. Style of mentoring helpful | 77% | 80% | 73% | |
| H. Lack of FP mentor in regional group not helpful | | | | 19% |
| I. Mentoring not helpful/ collaboration already established | 15% | 50% | 36% | 60% |
| J. Mentors need to be from same type of practice | | | | 40% |
| K. Mentors inexperienced | 13% | | | 13% |
| L. Difficult to coordinate large groups/times inconvenient | 30% | 50% | 38% | |
| M. Did not access mentors | | 20% | 40% | |
| N. Mentors not accessible | | | 18% | |
| | | | | |
| **Collaborative practice model and exercises** | | | | |
| A. Excellent | 20% | | | |
| B. Somewhat helpful | 17% | 30% | | |
| C. Too time consuming | 23% | | | |
| D. Exercises helpful for clarifying issues/ collaboration | 23% | 20% | 38% | |
| E. Gave structure to discuss issues with partner | 10% | | 18% | |
| F. Practice Based Small Group Learning cases helpful | 10% | | 18% | |
| G. Not helpful/already established collaborations | 17% | 50% | 45% | 60% |
| | | | | |

| | High NPs (n=30) | High FPs (n=10) | Low NPs (n=11) | Low FPs (n=5) |
|---|---|---|---|---|
| **Web-based support** | | | | |
| A. Didn’t use it/used it very little | 77% | 100% | 75% | |
| B. Web site too time consuming/frustrating/technical difficulties | 60% | | | |
| C. Technical problems | | 20% | 25% | |
| | | | | |
| **Sustaining collaborative practice** | | | | |
| A. Structures in place | 60% | 70% | 50%+* | |
| B. Good foundation but need more work | 30% | | | |
| C. Structures not in place | | 30% | | |
| | | | | |
| **Successful strategies** | | | | |
| A. Having regular meetings | 37% | | 45% | 20% |
| B. Address concerns/discuss roles | 20% | | | |
| C. Use fax/phone for communication | 13% | | | |
| D. Collaboration takes time; patience needed | 30% | | 18% | |
| E. Educate FPs and others about NP role, medical-legal issues and scope of practice | 13% | 30% | | |
| F. Develop roles, policies and procedures and written medical directives early in collaboration | 20% | | 36% | |
| G. Formal system in place to review cases | 10% | | | |

| | High NPs (n=30) | High FPs (n=10) | Low NPs (n=11) | Low FPs (n=5) |
|---|---|---|---|---|
| H. Make decisions as a team | 10% | | | |
| I. Define roles in relation to practice needs | | 20% | | |
| J. Open communication | | 20% | 12% | |
| K. Supportive FP or low NP/FP ratio | | | 32% | |
| L. Use PBSGL modules | | | 19% | |
| M. Develop a collegial relationship between NP and FP | | | 55%<br>50% | 40% |
| N. Commitment to work through issues | | | 18% | 40% |
| | | | | |
| **Recommendations for future collaborative teams** | | | | |
| A. Change fee structure for FPs/provide financial incentive | 20% | | | |
| B. Increase awareness of NP role | 13% | 20% | | |
| C. Provide models of agreements that have been successful | 10% | | | |
| D. Have regular meetings | 10% | | 18% | |
| E. Provide NP role information early in process | | 20% | | |
| F. Develop collaborative toolkit | | | 27% | 40% |
| G. Ensure FP is supportive before program starts | | | 18% | |
| | | | | |
| **Suggestions for future mentoring and support programs** | | | | |

| | High NPs (n=30) | High FPs (n=10) | Low NPs (n=11) | Low FPs (n=5) |
|---|---|---|---|---|
| A. SIP should continue/requirement for new teams | 10% | | 18% | |
| B. Assign groups by type of practice setting not geographically | 20% | 50% | 55% | 100% |
| C. Ensure participants are new to collaborative practice or interested in participating | 17% | | | |
| D. Clarify expectations of participants/defined roles for mentors | 17% | | 12% | |
| E. Mentors are needed | 20% | | | |
| F. Mentors should be experienced | 17% | | | |
| G. Use teleconferences | 10% | | | |
| H. Have regular/more meetings | 17% | 20% | 12% | |
| I. Better screening process for participants | | | 38% | |
| J. Electronic program to facilitate MOHLTC data collection | | | 18% | |
| K. Develop formal collaborative network | | | 36% | |
| L. Organize structured regional meetings around themes | | | 45% | |
| M. Have smaller regional groups | | | 18% | |

* Only "majority" reported

**Summary of the MOHLTC Performance Report data**

SIP nurses saw a change in their functioning within their scope of practice, moving towards more curative and rehabilitative care. Although not statistically significant, the MOHLTC

Performance reports results reflect a change in collaborative patterns with decreasing patterns of NP consultations and referrals and increasing FP referral to the NP. Analysis, however, showed there was no significant difference between the NPs who had participated in the SIP program and those who had not, regarding function and collaborative patterns.

Results should be considered with caution, since all of the analyses were largely underpowered (under 0.80), meaning that even if there were actual differences, the small sample size would not allow them to be detected. Furthermore, since the participants were not randomly assigned to groups, potential confounding variables (population characteristics, patients profile, environment, etc.) may have been unequally distributed between groups. The performance report, as a data collection tool, provided such data variability in the data that one might question the consistency with which nurses completed the reports. Finally, changes in professional behaviours may take longer to be fully integrated in the day-to-day practice.

## DATA TRIANGULATION

### Survey and interview data

With regard to facilitators for collaboration, comparable results were seen between the interviews and the surveys for both the NPs and the FPs. The NPs focused on relational issues, a sense of preparedness for their role and support within their practice and the community. Specifically, the NP survey data identified the following facilitators:

- Degree of acceptance of their role from patients
- Degree of acceptance of their role from the physician
- Nature of their employment relationships
- Personality and philosophy of the physician
- Practice model under which they operate
- Orientation of the health care team to their role
- Their education preparation through the NP program
- Their working relationship with other providers
- Degree of acceptance of their role from the community

Similarly, the high participant NPs that were interviewed identified:

- Openness to collaboration

- Mutual trust/respect
- Clearly defined roles
- A shared vision of care
- A personal or compatible relationship
- Communication with other health care providers
- Support from the practice setting
- Easy access to the FP as facilitators to collaboration

The interviews of the LNPs also identified relational issues as integral to collaboration, including:

- A compatible personal relationship
- Previous experience with the partner
- The personality of the FP
- A sense of mutual trust and respect.

The LNPs also added collaborative practice strategies such as:

- Clearly defined roles
- Easy access to the partner
- Support from the practice setting
- A team approach
- A clear understanding of the NP scope of practice
- Financial support for the FP

As the majority of the low participants indicated they were in successful collaborative practices, it is likely that these facilitators have been successful over time.

The FPs, on the other hand, identified working conditions and the knowledge and expertise of the NP as facilitators to collaboration in both the surveys and the interviews. From the surveys, the reported facilitators included:

- How the working relationship between NP and FP was structured
- Acceptance of the NP role by patients
- Co-workers understanding of the NP role
- NP knowledge and skill to work within their full scope of practice
- How long the FP and NP have been working together
- The nature of the NP employment relationship

- Confidence of the NP
- Expertise of the NP

The interviewed HFPs also reported factors associated with working conditions such as:

- Having the partner on site
- Sharing patient rosters
- Easy access to the NP
- Whether an NP was needed in the practice
- The patient's attitude toward the NP
- Having regular meetings
- The ability of the NP to be helpful to the practice

LFPs that were interviewed identified clear goals and the NP's experience or previous experience with collaboration as factors that facilitated collaboration.

The interview data provided additional detail in the identification of barriers. Survey results for the NPs focused on legislative and funding issues. The interview data for both the HNPs and the LNPs reported FP financial disincentives; NP limited prescriptive authority and concerns about liability as barriers. The HNPs also reported lack of FP buy-in, having the FP off site, FP concerns about their role and a lack of support outside the practice as barriers to collaboration. The LNPs added lack of support outside the practice, lack of understanding about the NP role and their scope of practice and a lack of administrative support as additional barriers.

The barriers identified by the FPs for the survey results focused on difficulties with the NP/FP working relationship (how the working relationship was structured, co-workers lack of understanding or acceptance of the NP and the nature of the NP/FP relationship) and regulated drug and laboratory tests. Interviewed HFPs reported having the FP off-site as the greatest barrier followed by a lack of understanding of the NP role, insufficient funding for NP overhead and changing the structure of an established practice. Barriers for the interviewed LFPs more closely followed the survey results, and included lack of support outside the practice, FP financial disincentives, FP time constraints, concerns about liability and lack of administrative support.

**Survey and MOHLTC performance data**

As part of the pre and post surveys, NPs were asked their perceptions about their service delivery. The MOHLTC performance reports (encounter data) served as an actual record of service. The NPs' perception of increased function related to care of minor and major acute illness (curative) and monitoring chronic illness (rehabilitative) identified by the role surveys was reinforced from the encounter data. That is, NPs who participated in SIP, demonstrated a change in their functions within their scope of practice, moving towards more curative and rehabilitative care. Although not statistically significant, the encounter data results reflect a change in collaborative patterns that would be expected with increased role integration and increasing collaboration i.e. decreasing pattern of NP consultations and referrals and increasing FP referral to the NP. The analysis, however, showed no significant differences between the NPs who had participated in the SIP project and those who had not, regarding scope of practice functioning and collaborative patterns.

## Discussion

The purpose of the evaluation was to determine the impact of the SIP program components on the development of collaborative practices and the successful integration of the NP role into the 117 positions. Specifically, the following questions were addressed:

5. Is there evidence of increased NP role integration?
6. Is there evidence of increased collaboration?
7. What factors facilitated or hindered collaboration and integration?
8. What are the recommendations for future mentoring and education programs?

The educational component of the program provided a model and standardized definition of collaboration and then used exercises to assist teams in developing a common purpose, completing a provider inventory for role clarity, assessing their practice for supports and constraints, developing a plan for their collaboration and applying the seven essential elements to clinical case examples. In addition, mentoring and regional meetings were provided to reinforce and support collaboration.

**Evidence of increased NP role integration**

In this study, evidence of increased NP role integration was based on three main domains: role clarity, functioning within one's scope of practice and job satisfaction. Positive changes in any of these factors following the program would suggest SIP program effectiveness.

*Role clarity*

Indications of role clarity was determined by reports from NPs and FPs, factors which evaluated how the NP was accepted within the practice and community and the FP reports of benefits to working with the NP.

Both the NP and the FP did not report significant differences in whether the NP's role was more clearly defined following the program. Two thirds of the NPs felt that their role was clearly defined before the program, a finding that stayed consistent. This may be due to the fact that 55% of the NPs had at least 12 months experience (range = 12 to 72 months) as an RN(EC) (see Process Evaluation of the SIP program). The FP reports of NP role clarity did increase from 47% to 73%, but was not significant.

Although role clarity did not appear to be an issue with the current sample, it was identified as an important facilitator to collaboration by both groups as well as previous research [4, 10, 13]. Specifically, a clear understanding of the NP and FP roles, agreement on the NP's role within the current practice structure and mutual respect for skills was flagged as important facilitators, while a lack of NP role clarity alignment was identified as an important barrier to collaboration. As well, those NPs who had clearly defined roles were significantly more likely to function within their full scope of practice.

Acceptance of the NP role both within and outside the practice also influences role clarity. Although the survey instruments did not measure this factor directly, both NPs and FPs identified acceptance of the NP role from the FP, patients and other health care professionals both inside and outside the practice as integral to facilitating collaboration.

Another indicator of role integration was the FPs' report of benefits to working with the NP. Similar to role clarity, the FPs reported high scores for working with the NP both before and after the program. These included:

- Applies knowledge and expertise in linking patients with community resources
- Focuses time and expertise on community education about health promotion
- Allows physicians to focus their skills in the care of more acute or complex patient problems
- Allows patients increased access to services
- NPs can focus time and expertise on specific patient populations
- NPs can focus time and expertise on patient education about health problem prevention and treatment
- Allows the practice setting to increase their patient population
- NPs reduce my workload

Once again, due to high pre program scores, a significant difference in benefits to working with the NPs after the program was not found.

*NP functioning within their full scope of practice*

Another important domain of role integration is whether the SIP program increased NP functioning within their full scope of practice. NP functioning within their full scope of practice, as opposed to activities performed by RNs, relates to involvement in the following

public health care domains: disease prevention (comprehensive health history, complete physical exam, laboratory/diagnostic evaluation, secondary and tertiary prevention); curative (acute episodic minor illness, diagnosis and treatment of minor injury); rehabilitative (laboratory/diagnostic evaluations, medication renewal); and supportive (referrals to medical specialists).

In this study, NP functioning within one's scope of practice was examined by the type of treatment services provided, the total number of patients seen by the NPs and reports of an increase of the NP as a primary care provider. Functioning is defined as having the knowledge and skills based on formal educational preparation, as well as, the legislated authority to practice (scope of practice) in the public health care activity.

NP functioning within their scope of practice did change over the year. Both the NPs and FPs reported that NPs treated more minor acute illnesses along with wellness/health care promotion following the program. These results are consistent with the type of NP activity reported by Sidini, Irving & DiCenso[8] in their Centre of Northern Health Research study for primary health care settings and the Ontario IBM NP Integration Study[4].

As well, the NPs reported treating significantly more patients with acute major illness and to having greater linkages with the community one year after the program started. The MOHLTC performance data also indicated increased activity in curative care and rehabilitative care. Along with the type of patients seen, the NPs also reported a significant change in the number of patients who considered them their primary care giver following the program, increasing from 38 to 55%.

These changes in NP service delivery are suggestive of both increased integration and increased NP/FP collaboration. The extended role of the NP allows for involvement in wellness care, management of acute minor illness and monitoring chronic conditions as well as seeing patients whose needs fall within the NP scope of practice as the primary provider. Increased involvement in acute minor illness management and chronic care monitoring would be expected if the NP were practicing within their full scope of practice. As the care of patients with chronic illness and acute major illness requires the involvement of both the NP and the physician, increased service delivery in these areas is reflective of collaboration and increasing interdependence. Increased community linkages would be suggestive of an

increased "settling" into the role requiring knowledge of community resources and an acceptance of the NP by community agencies. Since a large part of the SIP program involved defining and clarifying how and when the NP role could be integrated with specific practices, these positive changes suggest that it was effective for NP functioning within their full scope of practice.

*Satisfaction with the NP role*

Another indicator of role integration relates to how satisfied both the NPs and FPs were with the role of the NP within the practice. NP job satisfaction was measured using Misener's Nurse Practitioner Job Satisfaction Scale [5], which looked at intra-practice partnerships, challenge and autonomy, professional/social/community linkages, professional growth, time and benefits. FP satisfaction of the NP role was measured using a scale developed for the study that addressed quality of care provided, length of time NP spends with patients, consultation with physician when appropriate, physician's ability to access the services of the NP, length of time NP spends completing documentation, and the amount of time required to support the NP.

Both pre and post scores for the NP were in the "minimally satisfied to satisfied range" with slightly lower scores following the program. Scores for the FPs fell within the "somewhat satisfied to very satisfied" range both pre and post program, with a slight increase in satisfaction following the program. In both cases, significant changes in satisfaction were not evident following the SIP program.

Thus, for role integration, the results of the measures indicate that the SIP program was effective for increasing NP functioning within their scope of practice but not for increasing role clarity or job satisfaction.

**Evidence of increased collaboration**

The second important goal of the SIP program was to facilitate collaboration between the NPs and FPs. Collaborative practice, for the purposes of this study, was defined as a process for communication and decision making that enables the separate and shared knowledge and skills of the care providers to synergistically influence the client/patient care being provided (Way, Busing, and Jones, 2000)[1]. As identified earlier, the purpose of

collaborative practice is to deliver comprehensive, patient centred care to a practice population through the most efficient and effective use of the provider resource.

The Structured Collaborative Practice Model© utilized for this study describes collaboration as a continuum of activity which falls within a spectrum of collaboration that moves from independent to increasing interdependent practice. On one end of the spectrum, NPs and FPs see patients that fall within their perspective scopes of practice. In the middle, NPs and FPs work interdependently, through consultation and referral. Finally, on the other end of the spectrum, FPs and NPs use interdependence through co-provision of care. Co-provision of care involves synergistic decision-making and bi-directional consultation and referral. The goal of the SIP program was to promote interdependence through co-provision of care.

The theory behind the Structured Collaborative Practice Model© is that the most effective collaboration (interdependence through co-provision of care) requires seven essential elements. These include co-operation, assertiveness, responsibility / accountability, autonomy, communication, co-ordination, and mutual trust and respect. The self-instructional guide and exercises required participants to define their purpose for collaboration, identify supports and constraints to collaboration, and then develop and implemented a plan specific to their practice to improve their collaboration.

The Jones Way Collaborative Practice Questionnaire was designed to measure these essential elements in relation to the degree of collaboration and satisfaction with collaboration. As well, the role surveys and the MOHLTC Performance collected data on bi-directional consultation and referral rates and the interviews provided data on collaborative practices.

*Degree of collaboration*

Pre and post program measures of the degree of collaboration for both NPs and FPs fell within the "agree to strongly agree" category for planning, communication, shared responsibility, cooperative decision-making, shared concerns about patient care, coordination of care, trust, respect and collaboration. Although the NPs reported slightly higher scores following the program, significant differences were not found between pre and program scores for either the NPs or the FPs or between the NPs and FPs.

*Satisfaction with collaboration*

The second part of the Collaborative Practice Questionnaire measured the degree of satisfaction for: shared planning, open communication, shared responsibility, cooperation, consideration of both nursing and medical concerns, shared planning, respect and trust for one another's knowledge and skills, collaboration in making decisions, the decision-making process and collaboration about decisions regarding patient care.

Similar to the previous results, scores for both the NPs and the FPs fell within the high end of the scale ("satisfied to highly satisfied") for both pre and post program. As such, significant differences were not found between the two groups or across time.

*Bi-directional consultation and referral*

The survey data from both the NPs and FPs did not indicate significant post program differences in bi-directional and consultation referral rates. Trends of increased NP/FP consultation were identified by the MOHLTC performance data, but did not show significant differences pre and post program.

*Interview comments on collaboration*

General comments about the SIP program in relation to collaboration were positive, For example:

- It allowed the development of models for collaboration for specific patient populations
- Allowed me to develop a collaborative group, which has increased the comprehensiveness and frequency of patient care
- Increased collaboration with other physicians in the group, not just the SIP partner

Between 30 to 43% of participants felt that the SIP program helped their collaborative practice. The NPs found the educational component most useful, whereas the FPs reported that the networking meetings were most useful for collaboration.

Evidence of increased collaboration is mixed. High scores on the degree of and satisfaction with collaboration both pre and post program suggests a ceiling effect for determining the impact of the intervention. Interview reports did indicate a positive impact of the program for just over a third of the participants. However, bi-directional consultation and referral (an

indication of shared planning), although increased steadily did not change significantly.

It is unclear why the FPs and NPs viewed successful collaborations differently, a finding also identified by the *IBM NP Integration Study* (2003)[4]. Possible factors may include: perceived status differentials, possible gender differences (female NPs = 97%, female FPs = 36%), historical nurse-physician relationships, different training methods, age, liability and regulatory issues, differing perceptions of competencies or a lower participation rate for the FPs in the program overall. Further research is needed to clarify this differential perspective.

**Facilitators and barriers to role integration and collaboration**

Another important goal of the project was to identify from both the NPs and FPs those factors that facilitated and/or hindered collaboration. This information came from two sources: a list of possible factors influencing collaboration given to both FPs and NPs through the role surveys and as open-ended questions via the interviews.

Jones and Way (2006) in their Collaborative Practice Learning Guide[9] describe practice-setting variables that can either facilitate or hinder collaboration. These include:

1. **Interactional or provider variables**: e.g. personal and professional maturity, willingness to collaborate, knowledge, skills and experience with collaboration;
2. **Patient variables**: e.g. health needs, demographics, willingness to receive care from teams, cultural and health care values;
3. **Organizational or work setting variables**: e.g. governance, management structures, policies and procedures, communication and co-ordination mechanisms, scheduling, infrastructure (supplies and equipment), clinic staffing, community resources, providers on or off site, geographic location;
4. **Systemic variables**: e.g. variables external to the organization or work setting such as professional legislation and licensure, federal/provincial/territorial government policies, funding mechanisms, professional socialization and education, medico-legal issues, health human resource planning.

These practice-setting variables provide a good framework for examining the facilitators and barriers to role integration and collaboration.

*Facilitators*

Although the facilitators to collaboration for both the NPs and FPs fell within the interactional, organizational and patient categories, both groups reported a different focus. The NPs mainly identified **collaborative activities** (organizational) and **relational** (interactional) issues whereas the FPs focused on **working conditions** (organizational) and **NP competency** issues (interactional). Additionally, both NPs and FPs identified patient factors as important facilitators.

Specifically, the NPs reported the following facilitators that supported their collaboration and role integration with their FP:

Interactional

- Trust
- Respect
- FPs' openness to collaboration
- A compatible personal relationship
- Experience with FP or a previous collaboration
- Acceptance of my role from the physician I work with
- Personality and philosophy of physician
- Education preparation through the NP program
- Prior work experience
- Sense of confidence

Organizational

- Clearly defined roles
- Cooperative decision-making
- A shared vision of care
- Easy access to their partner
- Good communication with other health care providers
- The nature of the employment relationship
- Practice model used
- Orientation of the health care team to NP role
- Working relationship with other providers

Patient

- Degree of acceptance of my role from patients
- Degree of acceptance of my role from the community.

The relational issues and collaborative team dynamics as facilitators to collaboration are integral aspects of the Structured Collaborative Practice Model©, thus suggesting a positive impact of the SIP program for the NPs. These factors have also been identified by other studies as essential to collaboration, including the *Implementing the Primary Care NP Role in Ontario* (2000)[8] and *the Ontario IBM NP Integration Study* (2003)[4].

On the other hand, across the various measures used in this study, the FPs consistently focused on working conditions and competency issues as important factors in their NP/FP collaboration. For example, the following facilitators were identified:

<u>Interactional</u>

- Communication
- Cooperation
- Respect and trust for one another's knowledge and skills
- Confidence of the NP
- Expertise of the NP
- NP knowledge and skill to work within their full scope of practice

<u>Organizational</u>

- How the working relationship between NP and FP was structured
- Shared decision-making
- Shared patient care plans
- Co-workers understanding of the NP role
- How long the FP and NP have been working together
- Having the partner on site
- Sharing patient rosters
- Easy access to the NP
- Whether an NP was needed in the practice
- Having regular meetings
- Ability of the NP to be helpful to the practice
- The nature of the NP employment relationship
- When the cost of having the NP wasn't too high
- When the NP reduced the physician's workload
- When the NP consulted appropriately with the FP

<u>Patient</u>

Acceptance of the NP role by patients

Common facilitators identified between FPs and NPs were cooperation, NP confidence and mutual respect and trust for the interactional category; shared patient care plans, shared decision-making and easy access to one's partner for the organizational category; and, acceptance of the NP role from patients in the patient category. The *RN(EC)-GP Relationship: A Good Beginning Study* (2003)[10] identified mutual respect and trust as important facilitators for collaboration. Similarly, the *IBM NP Integration Study* (2003)[4] identified mutual respect and a willingness to cooperate as important.

However, many more differences were found across categories between NPs and FPs for identified facilitators. Essentially, the facilitators identified by the NPs focused on "how to work together" while the FPs facilitators relate to how the "NP helped the practice". Clearly, the NPs recognized the FPs' perspective because they identified "a sense of preparedness for their role" and "degree of acceptance within their practice and community" as important facilitators to collaboration.

The FPs focus on working conditions and competencies of the NP has been reported in previous collaborative research. The *RN(EC)-GP Relationship: A Good Beginning Study* (2003)[10] identified understanding legal responsibility, dealing with hierarchy and understanding the NPs practical experience as basic building blocks to a successful working relationship. Bailey, Jones and Way (2005)[11] found that concerns about NP competency and perceived control over their professional practice were main themes emerging from conversations with NPs and FPs in rural collaborative practices.

Regarding competencies, previous research has also indicated that FPs do not assume NP competence until they have worked with them, [10, 11, 12, 13.] For example, Bailey Jones and Way (2005)[11] found that the FPs' perception of NP competence was related to the NP's previous practice experience as well as their adherence to their scope of practice. This is perhaps why the NPs rated "a sense of confidence" and "degree of acceptance of my role from the physician I work for" as important facilitators to their collaborative practice, whereas, the FPs identified "knowledge, expertise and confidence of the NP" as important facilitators.

Time and experience played key roles in this study and may reflect the FPs increased understanding of the NP's role and capabilities and/or the NP's sense of confidence in their position. Time is also required to build relationships and develop trust and respect, a finding identified in this study and others [4, 10]. For example, older NPs had a higher perceived status in the community, a better sense of ability to deliver quality care, and greater inter-disciplinary interactions. As well, more years nursing was significantly related to the NPs perception of their ability to deliver quality care and an increased satisfaction with their working relationship. Interestingly, the length of time as an NP did not influence either role integration or collaboration. For the FPs, the longer their medical experience, the more satisfied they were with the NP and the higher their reported collaboration scores.

**Barriers to collaboration**

Many of the same barriers to collaboration were identified by both the NPs and the FPs in relation to interactional, systematic and organizational factors. Both NPs and FPs reported lack of understanding of the NP role as a barrier. NPs added reluctance on the part of the FP to enter into collaborative practice and concern that the presence of the NP would interfere with the FP's ability to act within the FP full scope of practice. In the organizational category, both NPs and FPs reported barriers to collaboration that included: the FP off-site, lack of funding to support NP activity, lack of support from other health professionals and lack of administrative support. Additionally, the FPs focused on the working relationship, while the NP cited FP time constraints. For systematic factors, common barriers included limited NP prescriptive authority, restricted NP laboratory lists, FP financial disincentives and concerns about liability. The NPs added restrictive provincial health policies as additional systemic barriers.

*Barriers to collaboration for NPs*

Interactional

- Lack of FP willingness to engage in collaborative practice
- Lack of FP understanding about role and scope of practice
- FP concern regarding role restriction

Organizational

- Lack of funding to support NP activity
- Lack of administrative support

- FP time constraints
- FP off-site
- Lack of support from other health care professionals

Systemic

- Limited prescriptive authority
- Restricted laboratory lists
- FP financial disincentives
- Restrictive provincial health policies
- FP concerns about liability

*Barriers to collaboration for FPs*

The barriers identified by the FPs mainly focused on organizational and systemic factors. These included:

Interactional

- Lack of FP understanding about role

Organizational

- How the working relationship is structured
- The nature of the employment relationship
- Co-workers lack of understanding/acceptance of the NP role
- Lack of administrative support
- FP off-site
- Insufficient funding for NP costs

Systemic

- Regulated prescriptive authority
- Restricted laboratory lists
- FP financial disincentives
- Concerns about liability

Concerns related to sharing the practice, patient allocation, workload, financial disincentives and responsibility, the barriers identified in this study by the FPs, have also been identified by Way, Jones and Baskerville (2001)[13], the *IBM NP Integration Study*[4] and the *Report on the Evaluation of Implementation of the Role of NP-Primary Health Care in Newfoundland and Labrador*[14], and may be partially explained by the number of FPs in this study who are

paid through fee-for-service (37%). As well, systemic barriers such as limited prescriptive authority, restricted laboratory lists, FP financial disincentives and concerns about liability have been identified in other NP integration studies [4, 13].

To address these concerns, *The Report on the Evaluation of Implementation of the Role of Nurse Practitioner – Primary Health Care in Newfoundland and Labrador* (2001)[14] recommended developing legislation and a regulatory framework around the authorities and role of the NP. Specifically, it recommended that the following issues be addressed: 1) a lack of common understanding of the role among managers, physicians and other health professionals; 2) a lack of acceptance of the role by some physicians – in particular (but not limited to) fee-for-service physicians; and, 3) a lack of clarity in the regulations regarding collaborative relationships with physicians, and differences in interpreting the legal implications of collaborating physicians.

**Summary**

In reviewing the impact of the SIP program for increasing NP role integration, collaboration and the identification of barriers and facilitators, a few caveats need to be considered. First, NPs and FPs clearly had a different focus regarding collaboration, the role of the NP within the practice and the facilitators that influence NP role integration and collaboration. The FPs' focus on working conditions, NP competencies, and their lower participation rates in the program suggests a "practice orientation" and a tendency toward the status quo. The NPs, on the other hand, focused on collaborative practices and interactional issues with their FP. Second, trends of increased role integration and collaboration were seen after the program. Both NPs and FPs reported higher collaborative scores, higher satisfaction with collaboration, greater benefits to collaboration, more referrals and bi-directional consultations and for the FPs, greater NP role clarity. Clearly, a ceiling effect occurred due to high pre program scores.

Even with a differential perspective between NPs and FPs and initially high pre program scores, significant differences were identified in NP functioning within their full scope of practice. More patients were seen, NPs increased service delivery within their extended role, and NPs reported being the primary provider to significantly more patients. However, due to the higher number of patient encounters, referral rates and consultations reported by the

NPs not participating in the program from the MOHLTC Performance Reports, it is not clear whether the SIP program influenced NP role integration.

There were other potential confounds to the evaluation of the program. The first was the heterogeneity of the participants, specifically the inclusion of experienced NPs and/or teams with newly designated NPs. Having individuals with previous collaborative experience in this evaluation calls into question the potential for experience, time or confidence levels affecting the results. Future research should endeavour to examine the impact of the education component on newly established NP/FP teams, a finding also recommended by the interview data. As well, although a data triangulation methodology was employed; higher participation rates would have added strength to the evaluation. Other lessons learned include ensuring pre program evaluation occurs before the orientation meeting, making sure that the web based learning is functioning and accessible and ensuring that the measurement tools are sensitive to and specific for measuring effective team function in community settings.

**Key Findings**

- Trends of increased role integration and collaboration were seen following the program. Both NPs and FPs reported higher collaborative scores, higher satisfaction with collaboration, greater benefits to collaboration, more referrals and bi-directional consultations and for the FPs, greater NP role clarity. Due to high pre program scores, a ceiling effect occurred, potentially obscuring significant program differences.

- Significant differences were identified in NP functioning within their full scope of practice. More patients were seen, NPs increased service delivery within their extended role, and they reported being the primary provider to significantly more patients. However, due to potential confounds in the program design, it is unclear whether these increases were due solely to the SIP program.

- NPs and FPs had a different focus regarding collaboration, the role of the NP within the practice and the facilitators that influence NP role integration and collaboration. The FPs focused on working conditions and NP competencies whereas the NPs focused on collaborative practices and interactional issues with their FP.

- The strengths of this demonstration project lie in the lessons learned and the identification of facilitators and barriers to interdisciplinary practice, which are detailed in the participants' recommendations for future collaborative efforts.

**Recommendations regarding future collaborative practice**

- SIP program should continue for new teams and involve a screening process to ensure participant interest
- Ensure that mentors are from the same practice type and are experienced
- Identify clear expectations and roles of both mentors and teams from the beginning
- Ensure technology is functioning well and is accessible
- Provide education about the role and scope of practice of the NP for the public, FPs and other health care professionals
- Develop roles, policies/procedures and written directives early on in the collaboration
    - Define roles in relation to the needs of the practice
    - Use models of agreements that have been shown to be effective
- Have a formal system in place to review cases and identify methods of communication
- Utilize team decision-making techniques
- Have a low FP / NP ratio
- Change the fee structure of the FPs to support collaborative practice
- Develop collaborative toolkits

**Recommendations addressing identified facilitators and barriers for collaborative practice**

*Systemic*

- Address systemic barriers to collaboration, including:
- Regulations associated with NP prescriptive authority
- Regulations associated with NP laboratory list restrictions
- Regulations associated with restrictive health policies
- FP financial disincentives associated with collaborative practices
- Guidelines regarding liability for both NPs and FPs
- Performance data collection methods and reporting

*Organizational*

- Develop coordinated practice guidelines addressing both FP and NP concerns
- Provide dedicated administrative support
- Review funding requirements to support NP activity
- Provide educational material or training to associated health care professionals regarding the NP role

*Patient*

- Address need to ensure the public/patients understand of the extended role functioning of NPs.

## Appendix A

### Jones Way Collaborative Practice Questionnaire for both NPs and FPs

**JONES WAY COLLABORATIVE PRACTICE QUESTIONNAIRE:**
**NURSE PRACTITIONER**

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Please answer the following two part questionnaire by indicating the number that best applies to you for each statement. There are no “right” or “wrong” answers. It is important that you respond to each statement. If you work with more than one nurse practitioner consider your overall collaboration and not the collaboration with a specific individual. Be assured that your answers are confidential.

---

**Name ____________________________________________Site ______________________________**

**Number of months total NP experience:** ___________

**Current Work Place:**

**Name of agency:______________________________________**

**Type of agency** ___________________________________

**Length of time in collaborative practice with current collaborating physician(s)**:

__________ mnths.

**Previous Experience With FP /NP Collaboration:** Yes ___ No ___

**If “Yes”, Length Of Time**: __________ Months

**Where?** ____________________________________________________________

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## PART 1: MEASURE OF CURRENT COLLABORATION

Consider your current experience of collaborative practice between you and the family physician(s) and rate your **degree of agreement or disagreement** with each statement. Place an “X” under the appropriate number.

**Rating Scale**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Some what Agree | Neutral | Some what Disagree | Disagree | Strongly Disagree |

| The family physician(s) and I: | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Plan together to make decisions about the care for the patients | | | | | | | |
| 2. Communicate openly as decisions are made about patient care | | | | | | | |
| 3. Share responsibility for decisions made about patient care | | | | | | | |
| 4. Co-operate in making decisions about patient care | | | | | | | |
| 5. Consider both nursing and medical concerns in making decisions about patient care | | | | | | | |
| 6. Co-ordinate implementation of a shared plan for patient care | | | | | | | |
| 7. Demonstrate trust in the other's decision making ability in making shared decisions about patient care | | | | | | | |
| 8. Respect the other's knowledge and skills in making shared decisions about patient care | | | | | | | |
| 9. Fully collaborate in making shared decisions about patient care | | | | | | | |

## PART 2: PROVIDER SATISFACTION IN CURRENT COLLABORATION

Consider your current experience of collaboration between **family physician**s and family physicians. For each of the following questions, place an "X" under the number that represents your current level of **satisfaction** or **dissatisfaction.**

**Rating Scale**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Satisfied | Satisfied | Some what Satisfied | Neutral | Some what Dissatisfied | Dissatisfied | Strongly Dissatisfied |

| What is your current level of satisfaction with: | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. The shared planning that occurs between you and the family physician(s) while making decisions about patient care. | | | | | | | |
| 2. The open communication between you and family physician(s) that takes place as decisions are made about patient care. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 3. The shared responsibility for decisions made between you and the family physician(s) about patient care. | | | | | | | |
| 4. The cooperation between you and family physician(s) in making decisions about patient care. | | | | | | | |
| 5. The consideration of both nursing and medical concerns as decisions are made about patient care. | | | | | | | |
| 6. The coordination between you and the family physician(s) when implementing a shared plan for patient care. | | | | | | | |
| 7. The trust shown by you and the family physician(s) in one another's decision-making ability in making shared decisions about patient care. | | | | | | | |
| 8. The respect shown by you and the family physician(s) in one and other's knowledge and skills. | | | | | | | |
| 9. The amount of collaboration between you and the family physician(s) that occurs in making decisions about patient care. | | | | | | | |
| 10. The way that decisions are made between you and the family physician(s) about patient care (that is with the decision making process, not necessarily with the decisions). | | | | | | | |

## JONES WAY COLLABORATIVE PRACTICE QUESTIONNAIRE: FAMILY PHYSICIAN

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Please answer the following three-part questionnaire by indicating the number that best applies to you for each statement. There are no “right” or “wrong” answers. It is important that you respond to each statement. If you work with more than one nurse practitioner consider your overall collaboration and not the collaboration with a specific individual. Be assured that your answers are confidential.

---

**Name ____________________________________________Site**

____________________________

**Medical Experience: Number of years in practice:** ___________

**Current Work Place:** ___________________________________

**Type of agency/ Practice:** _________________________________

**Length of time in collaborative practice with current Nurse Practitioner**(s): __________ Months

**Previous Experience With FP /NP Collaboration:** Yes ___ No ___

**If “Yes”, Length Of Time**: __________ Months

**Where?** ____________________________________________________________

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## PART 1: MEASURE OF CURRENT COLLABORATION

Consider your current experience of collaborative practice between you and the nurse practitioner(s) and rate your **degree of agreement or disagreement** with each statement. Place an “X” under the appropriate number.

**Rating Scale**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Agree | Agree | Some what Agree | Neutral | Some what Disagree | Disagree | Strongly Disagree |

| The nurse practitioner(s) and I: | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. Plan together to make decisions about the care for the patients | | | | | | | |
| 2. Communicate openly as decisions are made about patient care | | | | | | | |
| 3. Share responsibility for decisions made about patient care | | | | | | | |
| 4. Co-operate in making decisions about patient care | | | | | | | |
| 5. Consider both nursing and medical concerns in making decisions about patient care | | | | | | | |
| 6. Co-ordinate implementation of a shared plan for patient care | | | | | | | |
| 7. Demonstrate trust in the other's decision making ability in making shared decisions about patient care | | | | | | | |
| 8. Respect the other's knowledge and skills in making shared decisions about patient care | | | | | | | |
| 9. Fully collaborate in making shared decisions about patient care | | | | | | | |

## PART 2: PROVIDER SATISFACTION IN CURRENT COLLABORATION

Consider your current experience of collaboration between nurse practitioners and family physicians. For each of the following questions, place an "X" under the number that represents your current level of **satisfaction** or **dissatisfaction.**

**Rating Scale**

| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|
| Strongly Satisfied | Satisfied | Some what Satisfied | Neutral | Some what Dissatisfied | Dissatisfied | Strongly Dissatisfied |

| What is your current level of satisfaction with: | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|---|
| 1. The shared planning that occurs between you and the nurse practitioner(s) while making decisions about patient care. | | | | | | | |
| 2. The open communication between you and nurse practitioner(s) that takes place as decisions are made about patient care. | | | | | | | |
| 3. The shared responsibility for decisions made between you and the nurse practitioner(s) about patient care. | | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 4. The cooperation between you and nurse practitioner(s) in making decisions about patient care. | | | | | | | |
| 5. The consideration of both nursing and medical concerns as decisions are made about patient care. | | | | | | | |
| 6. The coordination between you and the nurse practitioner(s) when implementing a shared plan for patient care. | | | | | | | |
| 7. The trust shown by you and the nurse practitioner(s) in one another's decision-making ability in making shared decisions about patient care. | | | | | | | |
| 8. The respect shown by you and the nurse practitioner(s) in one and other's knowledge and skills. | | | | | | | |
| 9. The amount of collaboration between you and the nurse practitioner(s) that occurs in making decisions about patient care. | | | | | | | |
| 10. The way that decisions are made between you and the nurse practitioner(s) about patient care (that is with the decision making process, not necessarily with the decisions). | | | | | | | |
| 11. The decisions made between you and the nurse practitioner(s) about patient care. | | | | | | | |

## *PART 3: ROLE APPROPRIATENESS*

Based on your current understanding of the nurse practitioner role, please place an "X"on the number which best represents your belief regarding the degree of **appropriateness** or **inappropriateness** for the nurse practitioner to see the patient described in each vignette for assessment and decision making. Please note that to be consistent with the use of these questions in previous research studies, the scale for PART 3 differs from PART I & 2. The lower numbers refer to "inappropriateness" and the higher to "appropriateness".

**Rating Scale**

| **0** | **1** | **2** | **3** | **4** | **5** | **6** | **7** | **8** |
|---|---|---|---|---|---|---|---|---|
| Highly | Very | Inappropriate | Some what | Neutral | Some what | Appropriate | Very | Highly |

**INAPPROPRIATE** **NEITHER** **APPROPRIATE**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1. A chronic alcoholic who is well known at your clinic | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| presents with the chief complaint of "I want to stop drinking". Liver function tests including protime are within normal limits. | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **2. A sexually active 20-year-old female complains of suprapubic tenderness and dysuria. She has been treated at least four times in the past for UTI**.. | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 3. A 16-year-old male presents to the clinic with a 2 day history of sore throat, high fever, and tender nodes. His sister has had recurrent Strep pharyngitis. | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **4. Patient B is a 24-year-old male with a long history of abdominal pain. Numerous UGI and BE exams have been normal. He smokes heavily and probably does not take antacids as prescribed**. | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 5. A 46-year-old female was recently hospitalized for minor surgery. While in the hospital, she was told she had high blood pressure and was begun on a diuretic. She comes to the clinic because she has no regular doctor. | | | | | | | | | |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Her blood pressure is 140 / 80. | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **6. An 87-year-old female has been bedridden for 2 weeks with influenza. Today she noted the acute onset of chest pain and shortness of breath.** | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **7. A 15 year old male is concerned because he has had homosexual urges and one homosexual encounter** | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **8. A 57-year-old male is concerned about the recent onset of chest pain, He has been in excellent health except for mild Type 2 diabetes controlled by diet.** | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| **9. A 38-year-old male has just been discharged from the hospital following an acute myocardial infarction. There is no evidence of heart failure or angina. He smokes and is overweight. He comes to you for information**. | | | | | | | | | |
| I feel that for the nurse practitioner to see this patient is | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |

In answering the above questions, what is your definition of "appropriate"?

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

______________________________________________________________________

Appendix B

## Role Surveys for both NPs and FPs

## SIP Nurse Practitioner Role Survey

Please complete the following three-part survey. All information will remain confidential to the evaluation team.

### Part A: Demographic Information:

Please complete the following information regarding your preparation and experience as a nurse practitioner.

| **1. Name** | |
|---|---|

| **2. Site** | |
|---|---|

| **3. Gender** | Male ___ Female ___ |
|---|---|

| **4. Age in years** | ____ years |
|---|---|

| **5. How many years have you practiced as a nurse (including years as a registered nurse and as a nurse practitioner)?** | ____ years of nursing |
|---|---|

**6. How did you obtain your nurse practitioner education? *(Check ALL that apply)***

____COUPN certificate program
____COUPN integrated program
____COUPN transition program
____Non-COUPN certificate program
____Non-COUPN degree program
____Other (please describe)
____________________
________________________________________

**7. How did you become licensed as an RN (EC)? *(Check ALL that apply)***

____Completed COUPN program
____Completed Non-COUPN program
____Completed the CNO three step process (Portfolio, OSCE, registration exam)
____Wrote CNO registration exam
____Other (please describe)
________________________________________

| **8. Did you work in the nurse practitioner role prior to licensure as a RN(EC)? Please circle.** | Yes →go 8.a<br>No → go to 9 |
|---|---|
| **8.a How long did you work as a NP prior to RN(EC) licensure?** | ___ ____ |

| 9. **How long have you practiced as a licensed RN(EC)?** | _____ _____ |
|---|---|

### Part B. Current Practice

The following questions ask you to describe your current practice as funded under the 117 NP positions in underserviced practices.

| **10. When did you begin to work in your current 117 funded position?** | ____/___/____ (day/month/year) |
|---|---|

| **11. Did you transfer from a previous position in your current organization to the 117 funded position? Circle please.** | Yes →go to 11.a<br>No → go to 12 |
|---|---|
| **11.a How many months did you work as a NP in this organization prior to your transfer to the 117 funded position?** | ______ months |

| 12. In what type(s) of organization are you currently practicing (i.e. the organization in which you work, not the agency sponsoring your position)? Please fill out the following chart as applicable i.e. if your 117 position requires that you practice in more than one organization or setting. | | | | |
|---|---|---|---|---|
| Organization (Check ALL that apply) | Hours per week/ per site | Number of facilities/offices you work in | Number of physicians in this setting | Number of physicians you work with in this setting |
| ____Community Health Centre | | | | |
| ____Aboriginal Health Access Centre | | | | |
| ____Family Health /Primary Care Network | | | | |
| ____Health Service Organization | | | | |
| ____Solo physician practice | | | | |
| ____Group physician practice | | | | |
| ____Family Practice Unit | | | | |
| ____Outpost/Nursing station setting | | | | |
| ____Long term care facility | | | | |
| ____CCAC | | | | |
| ____Community Nursing Agency such as VON or Public Health | | | | |
| ____Emergency Department | | | | |
| ____Other Hospital Department ______________ | | | | |
| ____Mental Health Service | | | | |
| ____Other (describe type) ________________________________ | | | | |

| 13. Through which of the following mechanisms are you paid in your 117 position? | |
|---|---|
| ____Direct employer (i.e. CHC, physician employer?) | ____Don't know |
| ____Transfer payment agency (e.g. municipality) | ____Other (specific)___________________ |
| ____Independent contractor | |

| 14. How are the physician(s) you work with paid? ***(check ALL that apply)*** | | |
|---|---|---|
| Fee-for-service ___<br>Capitation ___ | Salary ____<br>Combination ____ | Don't know ____<br>Other (specify) _____________________________ |

| 15. Were you or another NP involved in developing the proposal for your 117 NP position? | Yes _____ | No _____ | Don't Know _____ |
|---|---|---|---|

| 16. Were you or another NP involved in developing your position/job description? | Yes _____ | No _____ | Don't Know ______ |
|---|---|---|---|

| 17. Was there any orientation of the physician and health care team to your role prior to or upon your arrival? | Yes ______<br>No ______ | Don't Know _______<br>Not applicable _____ |
|---|---|---|

## Part C: The following questions ask you to describe your current work within your 117 NP position and your current satisfaction with that work.

| 18. Is your current role clearly defined? | ____Yes | _____No | _____Don't know |
|---|---|---|---|

| 19. In an average week, please allocate what percentage of your time is spent on each of the following categories of duties: | Percentage of Time |
|---|---|
| In clinic – direct care for and about patients (appointments, telephone contact, consulting or case conferencing) | _____% |
| In clinic – lab procedures (venipuncture, EKGs, etc) | _____% |
| Outside clinic – home visits to housebound patients | _____% |
| Outside clinic – community presentations, programs | _____% |
| Non-clinical: Clerical/administrative, staff meetings | _____% |
| Non-clinical: research, mentoring students, professional development | _____% |
| Travel (i.e. to see patients) | _____% |
| Other (specify) ____________________________________________ ____________________________________________ | _____% _____% |
| Total | 100% |

| 20. In an average week, please allocate what percentage of your time is spent on each of the following categories of duties: | Percentage of Time |
|---|---|
| Wellness care/health promotion | _____% |
| Care of minor acute illness | _____% |
| Monitoring of chronic illness | _____% |
| Care of major acute illness | _____% |
| Care of palliative patients | _____% |
| Night and weekend on-call coverage | _____% |
| Linkages to community organizations | _____% |
| Psychosocial support and counseling | _____% |
| Other (specify) ____________________________________________ ____________________________________________ | _____% _____% |
| Total | 100% |

| 21. Please provide an estimate of the breakdown of the patient population that you (not the practice) serve. | |
|---|---|
| 21a. Age of patient | Percentage |
| Children (0-12 years) | _____% |
| Adolescents ( 13 -18 years) | _____% |
| Adults ( 19 – 64) | _____% |
| elderly (65+ years ) | _____% |
| Total | 100% |
| 21b. Gender | |
| Female | ____% |
| Male | ____% |

| | Total | 100 % |
|---|---|---|

| **22. Do you "specialize" or care for a specific population of clients?** | **___ Yes →go to 22a**<br>**___ No → go to 23** |
|---|---|
| 22a. Which groups do you care for? (Check ALL that apply) | |
| ____Aboriginal | ____Seniors |
| ____Abused women | ____Children / adolescents |
| ____Immigrants / refugees | ____Babies/newborns |
| ____Mental Health | ____Women's health |
| ____Patients with specific condition or disease (e.g. diabetes, hypertension, asthma | ____Other (specify) |
| ____"Orphan" patients | |

| **23. Please estimate the number of patients you see (appointments, telephone contact) in an average clinic day (i.e., 8 hours),** | |
|---|---|
| Average number of patients seen | ________ per day |

| **24. For what percentage of your patients are you their primary care provider?** | __________ % |
|---|---|

| **25. Do you participate in on-call activities? Circle one.** | Yes → go to 25a<br>No → go to 26 |
|---|---|
| **25a. What is the average number of hours per month on call? ______**<br>**Please describe your on-call activities (i.e. what do you do, how do you work with your physician, how are you backed up): ________________________________________________________________________** | |

| **26. How are patients assigned to your care? ( Check ALL that apply)** | |
|---|---|
| ____Patient books appointment specifically with me | ____Referral from physician out in the community |
| ____Referral from another setting | ____Receptionist assigns patients |
| ____Referral from a colleague within the setting | ____Triage |
| ____Other (please describe) | |

| 27. Please indicate your level of satisfaction in your current job as a NP. There may be items that do not pertain to you; however, please answer them based on the employer's policy, i.e., if you needed it, would it be there? | | | | | | |
|---|---|---|---|---|---|---|
| **Please circle the one best answer for each question below** | **6 Very Satisfied** | **5 Satisfied** | **4 Minimally Satisfied** | **3 Minimally Dissatisfied** | **2 Dissatisfied** | **1 Very Dissatisfied** |
| Vacation/Leave policy | 6 | 5 | 4 | 3 | 2 | 1 |
| Benefit package | 6 | 5 | 4 | 3 | 2 | 1 |
| Retirement plan | 6 | 5 | 4 | 3 | 2 | 1 |
| Time allotted for answering messages | 6 | 5 | 4 | 3 | 2 | 1 |
| Time allotted for review of lab and other test results | 6 | 5 | 4 | 3 | 2 | 1 |
| Your immediate supervisor | 6 | 5 | 4 | 3 | 2 | 1 |
| Percentage of time spent in direct patient care | 6 | 5 | 4 | 3 | 2 | 1 |
| Time allocation for seeing patients (e.g. amount of time allocated to see patients) | 6 | 5 | 4 | 3 | 2 | 1 |
| Amount of administrative support | 6 | 5 | 4 | 3 | 2 | 1 |
| Quality of assistive personnel | 6 | 5 | 4 | 3 | 2 | 1 |
| Patient scheduling policies and practices (e.g. practices regarding scheduling of patients) | 6 | 5 | 4 | 3 | 2 | 1 |
| Patient mix | 6 | 5 | 4 | 3 | 2 | 1 |
| Sense of accomplishment | 6 | 5 | 4 | 3 | 2 | 1 |
| Social contact at work | 6 | 5 | 4 | 3 | 2 | 1 |
| Status in the community | 6 | 5 | 4 | 3 | 2 | 1 |
| Social contact with your colleagues after work | 6 | 5 | 4 | 3 | 2 | 1 |
| Professional interaction with other disciplines/other providers | 6 | 5 | 4 | 3 | 2 | 1 |
| Support for continuing education (time & $$) | 6 | 5 | 4 | 3 | 2 | 1 |
| Opportunity for professional growth | 6 | 5 | 4 | 3 | 2 | 1 |
| Time off to serve on professional committees | 6 | 5 | 4 | 3 | 2 | 1 |
| Amount of involvement in research | 6 | 5 | 4 | 3 | 2 | 1 |
| Opportunity to expand your scope of practice | 6 | 5 | 4 | 3 | 2 | 1 |
| Interaction with other NPs, including faculty | 6 | 5 | 4 | 3 | 2 | 1 |
| Consideration given to your opinion and suggestions for change in the work setting or office practice | 6 | 5 | 4 | 3 | 2 | 1 |
| Input into organizational policy | 6 | 5 | 4 | 3 | 2 | 1 |

| 27. Please indicate your level of satisfaction in your current job as a NP. There may be items that do not pertain to you; however, please answer them based on the employer's policy, i.e., if you needed it, would it be there? | | | | | | |
|---|---|---|---|---|---|---|
| **Please circle the one best answer for each question below** | **6 Very Satisfied** | **5 Satisfied** | **4 Minimally Satisfied** | **3 Minimally Dissatisfied** | **2 Dissatisfied** | **1 Very Dissatisfied** |
| Freedom to question decisions and practices | 6 | 5 | 4 | 3 | 2 | 1 |
| Expanding skill level/procedures within your scope of practice | 6 | 5 | 4 | 3 | 2 | 1 |
| Ability to deliver quality care | 6 | 5 | 4 | 3 | 2 | 1 |
| Opportunities to expand your scope of practice and time to seek advanced education | 6 | 5 | 4 | 3 | 2 | 1 |
| Recognition of your work from superiors | 6 | 5 | 4 | 3 | 2 | 1 |
| Recognition of your work from peers | 6 | 5 | 4 | 3 | 2 | 1 |
| Level of autonomy | 6 | 5 | 4 | 3 | 2 | 1 |
| Evaluation process and policy | 6 | 5 | 4 | 3 | 2 | 1 |
| Reward distribution | 6 | 5 | 4 | 3 | 2 | 1 |
| Sense of value for what you do | 6 | 5 | 4 | 3 | 2 | 1 |
| Challenge in work | 6 | 5 | 4 | 3 | 2 | 1 |
| Opportunity to develop and implement ideas | 6 | 5 | 4 | 3 | 2 | 1 |
| Process used in conflict resolution | 6 | 5 | 4 | 3 | 2 | 1 |
| Amount of consideration given to your personal needs | 6 | 5 | 4 | 3 | 2 | 1 |
| Flexibility in practice protocols | 6 | 5 | 4 | 3 | 2 | 1 |
| Respect for your opinion | 6 | 5 | 4 | 3 | 2 | 1 |
| Acceptance and attitudes of physicians outside of your practice (such as specialist you refer patients to) | 6 | 5 | 4 | 3 | 2 | 1 |

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| **28. Do you function within your full scope of practice?** | ___Yes → go to 29<br>____No → go to 30 |
|---|---|
| **28a. If no, why not?** (specify) | |

| **29. Is your practice limited to seeing certain patients? (i.e. home care visits)** | ] Yes → go to 29a<br>] No → go to 30 |
|---|---|
| **29a. If yes, are your limitations due to:** | |
| ____Chosen area of speciality | Other (describe) ______________________ |
| ____Requirement of employer / practice site | |

| **30. What factors in your practice setting facilitate / create barriers to your ability to fulfill your NP role? (Check All that apply)** | **Barriers** | **Facilitators** |
|---|---|---|
| The personality and philosophy of physicians with whom I practice | | |
| Orientation of the health care team to my role | | |
| The nature of my employment relationship (e.g. employed by organization, employed by physician practice) | | |
| The practice model under which I operate (e.g. collaborative practice) | | |
| The way my role has been defined – too narrow | | |
| The way my role has been defined – too broad | | |
| My educational preparation through the NP program | | |
| Working relationships with other providers within the practice | | |
| My work experience prior to entering the NP program | | |
| Funding NP positions through multiple strategies. | | |
| Level of my own confidence to take on the responsibilities of this new role | | |
| Degree of acceptance of my role from the physician(s) that I work with | | |
| Degree of acceptance of my role from health care providers in the practice | | |
| Degree of acceptance of my role from health care providers outside the practice | | |
| Degree of acceptance of my role from patients | | |
| Degree of acceptance of my role from the community | | |
| Isolation in practice (only NP in setting) | | |
| Number of patients that I see in my practice (appropriate number, too few or too many patients to practice in this role satisfactorily) | | |
| Available physical space for my work (e.g. enough or not enough room in the office) | | |
| OHIP policies regarding referrals to specialists. | | |
| Available administrative support and office and medical supplies for my work | | |
| Funding for NP related activities (sufficient or insufficient money for travel, continuing education, health promotion) | | |
| Legislation such as the Public Hospitals Act, Long term care Act, Nursing Homes Act, etc | | |

| 30. What factors in your practice setting facilitate / create barriers to your ability to fulfill your NP role? (Check All that apply) | Barriers | Facilitators |
|---|---|---|
| Regulated drug and laboratory lists | | |
| Policies of Ministry program and 3rd party payers regarding NP signature | | |
| Others (specify) | | |

**31. Has your physician partner expressed any concerns regarding your scope of practice and his or her liability?**

_____Yes → go to 31a & b
_____No → go to 78

**31a. If yes, how have these concerns been addressed?**

____We have discussed them and resolved the concerns
____We are still discussing these concerns
____These concerns have not been addressed

**31b. Do you view this issue as a barrier to your practice?** ____Yes _____No

| **32. Do you have any concerns regarding your own liability as a nurse practitioner?** | ___Yes → go to 32a & b<br>___No → go to 33 | |
|---|---|---|
| **32a. If yes, what are some of the reasons for these concerns?** ***(Check All that apply)*** | How Often?<br>Sometimes<br>Often | |
| ____I feel that I am asked to practice outside of my scope | | |
| ___I feel that I am not given enough information to treat patients properly | | |
| ___I feel that I am not competent to perform some of the tasks I am asked to perform | | |
| ___I feel that my liability coverage is inadequate | | |
| Other (specify) ________________________________ | | |
| **32b. Do you view this issue as a barrier to your practice?** | ____ Yes | ____ No |

| 33. Is/are the physician(s) with whom you collaborate located… | ____On-site → go to 33a<br>____Off-site → go to 33b & c<br>______Combination → go to 33a, b, & c |
|---|---|

**33a. If on-site, how often is the physician available to you?**

___Rarely ____Sometimes ____Often ___As needed

**33b. If off-site, how do you primarily connect with this physician?**

___Phone ___ In person ___Fax ___ E-mail ___Combination

___ Other (specify)________________

**33c. If off-site, how often do you connect?**

___Once a day ___More than once a day ___A few times per week

___Once per week ___ Once per month ____ Other(specify) ______________________

**34. How satisfied are you with the physician's availability?**

___Very Satisfied ___Satisfied ___Minimally Satisfied ___Minimally Dissatisfied ___Dissatisfied ___Very Dissatisfied

**35. From whom do you receive referrals? *(Check ALL that apply)***

___Physicians
___Nurses
___Nutritionist
___Other (please specify)
___Mental Health
___Social Worker
___No referral – patients walk in
___Patients refer themselves

| 36. Do you make referrals to specialists? | ___Yes → go to 36a<br>___ No → go to 37 |
|---|---|

**36a. If yes, how?**

____I refer the patient to the physician who sees the patient, and writes the consult note
____I write the consult note, and the physician signs the note
____The physician writes the consult note after discussing the matter with me
____Other (specify)

| 37. In a given week, what percentage of patients that you refer do you: (Check All that apply) | Refer | Percentage |
|---|---|---|
| Refer to the physician for referral to a specialist | ____ | ____% |
| Refer to the physician because patient care needs are outside the scope of your practice | ____ | ____% |
| Refer to the physician because the patient care needs are within the scope of your practice but you are not comfortable handling the case | ____ | ____% |
| Refer to the physician due to a pre-set arrangement with the physician (i.e. you refer all cardiac patients to the physician | ____ | ____% |
| Refer to a medical specialist directly | ____ | ____% |

| 38. Are you able to deliver care in the way you would like? | _____Yes → go to 39<br>_____No → go to 38a |
| --- | --- |
| 38a. If no, please explain | |

| 39. Please indicate which of, and how many, of the following practitioners you practice with in your practice setting? (Check All that apply) | Practice On Site | Number |
| --- | --- | --- |
| RNs | | _____ |
| RPNs. | | _____ |
| Midwives | | _____ |
| Physiotherapists | | _____ |
| Dieticians | | _____ |
| Occupational Therapists | | _____ |
| Social Workers | | _____ |
| Mental Health | | _____ |
| Other ____________________________________ | | |
| ____ Don't practice with other practitioners in my practice setting | | |

Thank you for completing this questionnaire.

The questionnaire was developed using the IBM NP Survey, and the T. Misener NP Satisfaction Scale. Both are used with permission.

# SIP Physician Role Survey

Please complete the following five part survey. All responses will remain **confidential** to the evaluation team.

**This survey is about your current work with the NP whose position is funded as part of the 117 positions for underserviced practices.** Throughout this survey, we are using the terms "Nurse Practitioner" and "NP" for those nurses who have obtained their extended class (EC) certification by the College of Nurse of Ontario for function as an NP unless indicated otherwise.

## Part A: Demographic Information:

Please complete the following information regarding your preparation and experience as a physician.

| 1. Name | |
|---|---|

| 2. Site | |
|---|---|

| 3. Gender | Male ___ Female ___ |
|---|---|

| 4. Age in years | ____ years |
|---|---|

| 5.a Year of graduation: from medical school | 19____ | |
|---|---|---|
| 5.b Year of graduation: from family practice residency program | 19____ | ___ Not applicable |

## Part B: Experience working with an NP

| 6: Do you currently work with an NP whose position is funded as part of the 117 positions for underserviced practices **or** have you worked with an NP in the past **or** do you anticipate working with an NP in the future ***(Check ALL that apply)*** | |
|---|---|
| 6.a ____ currently work with an NP | How long have you worked with the NP funded in the 117 position? _____ months |
| 6.b ___ worked with NP in the past (NPs with or without RN (EC) certification)→ go to 6.c 6.b | How long did you work with an NP in the past? ____ years |
| 6.c ___ will be working with an NP | When do you anticipate starting your work with an NP ____/ ___ mm/yy |

If you practice with more than one NP, please answer the following questions with respect to the NP whose position is funded as part of the 117 positions in underserviced practices. Note, for ease of completion, all questions are worded as if you are currently working with an NP. Although you may not he currently working with an NP, please respond to these questions for the time you did work with an NP **or** when you will be working with an NP.

| 7. Please indicate in which of the following practice settings you work with the NP. **(Check ALL that apply)** | |
|---|---|
| ____ Community Health Centre | ____ Outpost/Nursing station setting |
| ____ Aboriginal Health Access Centre | ____ Long term care centre |
| ____ Family Health Network/Primary Care Network | ____ CCAC |
| ____ Health Service Organization | ____ Community Nursing Agency such as VON or Public Health |
| ____ Solo physician practice | ____ Emergency Department |
| ____ Group physician practice | ____ Other Hospital Department |
| ____ Family Practice Unit | ____ Mental Health Service |
| | ____ Other (describe type) ________________________________ |

| 8. Were you or another physician involved in developing the proposal for the 117 NP position? | Yes ___ | No___ | Don't know ___ |
|---|---|---|---|

| 9. Were you or another physician involved in developing the position/job description or hiring for the 117 NP position? | Yes ___ | No___ | Don't know ___ |
|---|---|---|---|

| 10. Was there any orientation for you and the health care team to the NP role prior to or upon the arrival of the NP in the 117 position? | Yes ______<br>No ______ | Don't Know _______<br>Not applicable _____ |
|---|---|---|

| 11. How did you become involved as the collaborating physician for the NP in the 117 position? | |
|---|---|
| ___ my physician practice applied for the position | ___ sponsoring agency recruited me |
| ___ I work at the hiring agency (e.g. CHC) | ___ other (specify) ___________________ |

| 12. Is the NP role clearly defined? | ____Yes | _____No | _____Don't know |
|---|---|---|---|

| 13. As the collaborating physician, where are you located? | ____ On-site with NP → go to 13.a<br>____Off-site → go to 13.b & c<br>____Combination → go to 13a, b, c |
|---|---|

13a. If on-site, how often are you available to the NP?
___Rarely __ Sometimes ___ Often ___As needed

13b. If off-site, how do you primarily connect with the NP?
___Phone ___In person ___Fax ___ E-mail ___ Combination
___Other (specify)_________________

13c. If off-site, how often do you connect?
___Once a day ___ More than once a day ___A few times per week
___Once per week ___Once per month
___Other(specify) ________________________________________

| 14. In a typical week, please estimate how much time you spend working directly with the NP? | ____ hours per week |
|---|---|

| 15. As part of your direct work with the NP, please describe the ways that you communicate/ interact with the NP. ***( Check ALL that apply)*** |
|---|
| ___ Discussions on the telephone |
| ___ Unplanned communication ( e.g. hallway consultations) |
| ___ As needed – e.g. the NP seeks me out when there are questions about a patient |
| ___ Regular meetings |
| ___ Work side by side with the NP |
| ___ Review charts/ orders ( please provide number of hours per work) _______ hours |

| 16a. How often does the NP refer patients to your care? ( i.e. you see the patient in a separate visit) | ___ Often | __ Sometimes | ___ Rarely | __ As needed |
|---|---|---|---|---|
| 16b. How often do you refer patients to NP's care? | ___ Often | __ Sometimes | ___ Rarely | __ As needed |

| 17. In the past 12 months, approximately what proportion of your professional income did you receive from each of the following payment methods? ( Excluding income for teaching, research etc) | |
|---|---|
| Fee – for – service | ____% |
| Salary | ____% |
| Sessional payments | ____% |
| Capitation | ____% |
| Other ( specify) | ____% |
| Total | 100 % |

| 18. Do you or your practice setting incur NP-related expenses for which funds are **not** provided? | ____ No | ___ Yes → go to 18b&c | ___ Don't know |
|---|---|---|---|

| 18b. If yes, what type of expenses are they? (Check ALL that apply) |
|---|
| ___ Additional rent |
| ___ Office expenses (e.g. supplies, telephone, printing, travel, etc.) |
| ___ Capital costs (e.g. medical and office equipment, information technology, etc.) |
| ___ Support services ( e.g. administrative/receptionist support) |
| ___ Costs related to patient health education/promotion |
| ___ Additional insurance costs |
| ___ Costs related to NP continuing education |
| ___ Other ( specify) ______________________________________________ |

| 18c. Please estimate the total overhead costs related to the presence of the NP in your practice setting (excluding salary). Provide a range if needed) | $ _______ to<br>$ _______ / year |
|---|---|

| 19a. Below is a list of services that an NP may provide. Please indicate the services provided by the NP and rank the TOP 3 SERVICES (1 being the most valuable contribution that the NP makes to the practice). If you not yet working with an NP under the 117 funding but will be, rank the services based on what you anticipate the most valuable NP contributions to be. | | |
|---|---|---|
| Services | Check ALL that apply | Rank TOP 3 |
| Wellness care/ Health Promotion | ___ | ___ |
| Care of minor acute illness | ___ | ___ |
| Monitoring of chronic illness | ___ | ___ |
| Care of major acute illness | ___ | ___ |
| Care of palliative patients | ___ | ___ |
| Home visits to housebound patients | ___ | ___ |
| Night and weekend on-call coverage | ___ | ___ |
| Linkages to community organizations | ___ | ___ |
| Psychosocial support and counseling | ___ | ___ |
| Other (specify) ____________________ | ___ | ___ |
| 19b Are there any activities NOT currently undertaken by the NP that you believe s/he should be doing? | ___ Yes, specify: | ___ No |
| 19c Are there any activities currently undertaken by the NP that you believe s/he should NOT be doing? | ___ Yes, specify: | ___ No |

## Part C: Facilitators & Barriers to Integration of the Nurse Practitioner role

| 20. In your experience, what factors **facilitate** effective integration of NPs? (Check ALL that apply and rank the top 3 facilitators) | Facilitators | Rank TOP 3 |
|---|---|---|
| How the working relationship between the MD and NP is structured | | |
| How long the MD and NP have been working together | | |
| The nature of the NP employment relationship (e.g. employed by organization, employed by physician practice, self-employed) | | |
| Co-workers' understanding of the NP role | | |
| Co-workers' acceptance of the NP role | | |
| Acceptance of the NP role by the health care providers outside of the practice (e.g. specialist MDs) | | |
| Acceptance of the NP role by patients | | |
| Acceptance of the NP role by the community | | |
| Practice style of the NP | | |
| NP prior RN experience | | |
| Expertise of the NP | | |
| Confidence of the NP | | |
| NP knowledge and skill to work within full scope of practice | | |
| NP knowledge and skill to work beyond scope of practice | | |
| Legislation that allows prescribing and ordering of tests | | |
| Other ( specify) _______________________________ | | |

| 21. In your experience, what factors create **barriers** to the effective integration of NPs? (Check ALL that apply and rank the top 3 barriers) | Barriers | Rank TOP 3 |
|---|---|---|
| How the working relationship between the MD and NP is structured | | |
| The nature of the NP employment relationship ( e.g. employed by organization, employed by physician practice, independent contactor) | | |
| Co-workers' lack of understanding of the NP role | | |
| Co-workers' lack of acceptance of the NP role | | |
| Level of acceptance of the NP role by the health care providers outside of the practice ( e.g. specialist MDs) | | |
| Resistance to the NP role by patients | | |
| Resistance to the NP role by the community | | |
| Practice style of the NP | | |
| NP lack of experience | | |
| NP lack of confidence | | |

| | | |
|---|---|---|
| NP lack of knowledge and skill to work within full scope of practice | | |
| NP working beyond scope of practice | | |
| NP consultation practices: consults with physician "too often" | | |
| NP consultation practices: consults with physician "not often enough" | | |
| Lack of physical space for NP | | |
| Inadequate funding for NP salary | | |
| Inadequate funding for NP-related expenses (e.g. travel, continuing education, NP practice overhead) | | |
| Government program and 3rd party payer policies that do not recognize NP practice | | |
| Regulated drug and laboratory lists | | |
| Medical-legal concerns related to responsibility for shared care | | |
| Other (specify) ________________________________ | | |

22. Please indicate (circle) the extent to which you agree with each of the following statements regarding the benefit to you of working with an NP.

| | Strongly Agree | Somewhat Agree | Somewhat Disagree | Strongly Disagree |
|---|---|---|---|---|
| Reduces physician workload | 1 | 2 | 3 | 4 |
| Allows physicians to focus their skills in the care of the more acute or complex patient problems | 1 | 2 | 3 | 4 |
| Allows the practice setting to increase their patient population | 1 | 2 | 3 | 4 |
| Allows patients increased access to service | 1 | 2 | 3 | 4 |
| NPs can focus time and expertise on specific patient populations (e.g. elderly, patients with diabetes) | 1 | 2 | 3 | 4 |
| NPs can focus time and expertise on patient education about health problem prevention and treatment, health promotion, etc. | 1 | 2 | 3 | 4 |
| NPs can focus time and expertise on community education about health promotion and disease prevention etc. | 1 | 2 | 3 | 4 |
| NPs can apply knowledge and expertise in linking patients with community resources | 1 | 2 | 3 | 4 |
| Other ( specify) ______________ | 1 | 2 | 3 | 4 |

## Part D: Satisfaction with the Role of the Nurse Practitioner

23. Please indicate your level of satisfaction with the NP by checking the **one best** response for

| each item below. | | | | |
|---|---|---|---|---|
| | Very Dissatisfied | Somewhat Dissatisfied | Somewhat Satisfied | Very Satisfied |
| Quality of care provided by the NP | 1 | 2 | 3 | 4 |
| Length of time NP spends with patients | 1 | 2 | 3 | 4 |
| Consultation with physician when appropriate | 1 | 2 | 3 | 4 |
| Physician ability to access the services of the NP | 1 | 2 | 3 | 4 |
| Length of time NP spends completing documentation | 1 | 2 | 3 | 4 |
| The amount of physician time required to support the NP | 1 | 2 | 3 | 4 |

| 24. How has your workload been affected by working with the NP? | | |
|---|---|---|
| ___ Increased | _____ % increase OR | ______ hours per week |
| ___ Decreased | _____ % increase OR | ______ hours per week |
| ___ No change | | |
| ___ Not applicable (have always worked with an NP) | | |

| 25. Has working with an NP affected the number of patients receiving care in **your** practice setting? | |
|---|---|
| ___ Yes | ___ Don't know |
| ___ No | ___ Not applicable (setting has always had an NP) |

| 26. Has working with an NP affected the nature of the patient population in **your** practice setting? | |
|---|---|
| ___ Yes ( briefly describe) ____________________________________________ | |
| ___ No | ___ Don't know |
| ___ Not applicable ( setting has always had an NP) | |

| 27. How has working with an NP affected your take home pay? | | |
|---|---|---|
| ___ Increased | ___ Decreased | ___ No change |

| 28. How has working with an NP affected your time away from the practice? (time off, time for vacation, time for continuing education activities ) | | |
|---|---|---|
| ___ Increased | ___ Decreased | ___ No change |

| 29. How has working with an NP affected your job satisfaction? | | |
|---|---|---|
| ___ Increased | ___ Decreased | ___ No change |

## Part E: Your Opinions regarding Nurse Practitioner Funding

| 30. How do you think that NPs should be remunerated (please indicate your level of agreement) | | | | |
|---|---|---|---|---|
| | 1<br>Strongly Disagree | 2<br>Somewhat Disagree | 3<br>Somewhat Agree | 4<br>Strongly Agree |
| NP paid directly by MOHLTC or an intermediary (other than MD) | | | | |
| Funding provided by the MOHLTC to a physician employer | | | | |
| Funding provided by the MOHLTC to an organization as employer (e.g. CHC, long term care facility, VON ) | | | | |
| NP paid out of physician professional earnings | | | | |
| NPs directly bills OHIP for services rendered | | | | |
| Other ( specify) __________ | | | | |

| 31. Who should be the NP employer? ***(Check ONE only)*** | |
|---|---|
| ___ MOHLTC | ___Health centre or other organization |
| ___ MD or physician group practice | ___ Self-employed |
| ___ Municipality or regional authority | |
| ___ Other (specify) ___________________ | |

Thank you for completing this questionnaire.

The questionnaire was developed using the IBM Physician Survey and is used with permission.

Appendix C

SIP Post Interview Guide

**SIP Post Interview Guide**

Name of Participant: ______________________________________________

Location of Practice: ______________________________________________

NP / FP (Circle one) Group 1 / 2 (circle one)

Utilizer: High / Low (Circle one) (For office use)

-----------------------------------------------------------------------------------------------------

**Introduction**

Thank you for agreeing to take part in this interview. Essentially, we are interested in your opinions about the SIP program, that is, what worked, what didn't and ways of facilitating future integration of the NP role and the development of collaborative teams.

All the data from these interviews will not include names and your confidentiality will be assured.

1. Overall, what are your general impressions of the SIP program?
2. Were there aspects of the program that helped you in your collaborative practice?
3. Were there aspects of the program that hindered your collaborative practice?
4. Could you please describe your practice (e.g., rural, women's health…)
5. For your specific situation or type of practice, what factors do you think facilitate collaboration?
6. Likewise, can you describe factors that you believe are barriers to collaboration?
7. Did the mentoring and on going support assist you in supporting the integration of the NP position within the practice?
8. How was your access to your mentor, in relation to:
    a. Availability?
    b. Time scheduling?
    c. Style of mentor?

9. Did the education component to the program, i.e., the collaborative practice model and exercises, assist your collaborative efforts?

10. Did you find the web-based support helpful? Please explain.

11. Are structures now in place to sustain your collaborative practice?

12. Can you provide instances of successful strategies that worked to increase your collaboration and supported integration of the NP role within your practice?

13. Can you provide recommendations for supporting the future development of new collaborative teams?

14. Can you provide recommendations for future mentoring and support programs?

15. Have you applied, been approved or are planning to apply, to become a family health team? No ______ Yes ______ (please circle above).

Any other comments?

Thank you very much for taking the time to provide your feedback.

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