

Family Medicine Residency Tracking Study

The 2008 Survey Report

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Introduction

The Family Medicine Residency Tracking Study (FMR-TS) is a multi-year study that tracks the residents and graduates of the Northern Ontario School of Medicine Family Medicine Residency (NOSM-FMR) Program. The objective of the study is to understand factors that influence physicians' choices of practice location and examine graduates' career plans, future education needs and their perceptions of the NOSM-FMR Program in preparing them for medical practice.

The study uses survey method to collect data. Four questionnaires (Entry, Exit, Two-Year and Five-Year Follow-up Surveys) are sent each year to two cohorts of NOSM-FMR residents who are entering the program or are about to graduate; and to two cohorts of graduates who completed the program two or five years ago, respectively. This report presents the results of the surveys conducted in May – August 2008 with four¹ cohorts of NOSM-FMR residents and graduates.

Section 1 provides information on the response rates and demographic profile of the respondents. Section 2 presents the results of the Entry and Exit Surveys. It describes intended practice locations, factors influencing practice location choices, plans and interests of the residents. The results of the follow-up surveys are presented in Section 3, which describes the NOSM-FMR graduates' career paths and education at two and five years after graduation, as well as practice profiles, practice environment and satisfaction with medical practice.

The final section of the report provides a summary of the results and outlines limitations and potentials of the study. Appendix A contains a brief description of the history and methodology of the FMR-TS. The tracking study has been approved by the Research Ethics Boards of Laurentian University and Lakehead University. Participation in the surveys is voluntary.

¹ Four NOSM-FMR cohorts surveyed in 2008 are: (1) *Entry cohort* or respondents who entered the NOSM-FMR Program in 2008; (2) *Exit cohort* or respondents who entered the program in 2006 and graduated in 2008; (3) *2-Year follow-up cohort* or respondents who entered the program in 2004 and graduated in 2006; and (4) *5-Year follow-up cohort* consisting of graduates who entered the program in 2001 and graduated in 2003.

1 Response Rates and Demographic Profile of Respondents

1.1 Response rates

Thirty-nine completed questionnaires were returned out of a total of 73 survey packages mailed in the spring and summer of 2008 to four cohorts of NOSM-FMR residents and graduates. The overall response rate was 53%, with a range of 17% to 73% (Table 1). To protect anonymity of the relatively small number of respondents, their demographic characteristics are presented together for two groups: (a) Entry and Exit cohorts and (b) 2-Year and 5-Year follow-up cohorts.

Table 1. Response Rates for the FMR-TS 2007 Surveys

Survey	Year of entry	Number of residents or graduates	Number of responses	Response rate, %
Entry ^A	2008	26	19	73
Exit ^A	2006 ^B	17	10	59
2-Year Follow-up ^C	2004	12	2	17
5-Year Follow-up ^C	2001	18	8	44
Total		73	39	53

^A Nine international medical graduates (IMGs) in the 2008 entry cohort and seven IMGs in the 2006 entry cohort are not included in the total numbers of residents and responses for the Entry and Exit surveys.

^B This cohort includes one resident who entered the program in year 2005, but did not complete the program with her cohort due to maternity leave.

^C Hereafter referred to as “2-Year” or “5-Year” surveys.

1.2 Demographic profile

There were 16 male and 23 female respondents. At the time of the survey, 64% of all respondents were married or cohabiting and 36% were single or divorced/separated (Table 2). Almost all respondents to the 2-year and 5-year follow-up survey were married. Twenty-one percent of the respondents (n=8) reported having one or more children living with them at the time of the survey (data not shown).

Table 2

Marital Status of Respondents by Sex

Marital status	Sex		Total N (%)
	male	female	
Married/cohabiting	10 (63%)	15 (65%)	25 (64%)
Single or divorced/separated	6 (37%)	8 (35%)	14 (36%)
Total	16 (100%)	23 (100%)	39 (100%)

The residents were asked about the size of communities where they and their spouses/partners spent most of their life, with communities classified into three categories of population size². A majority of all respondents and their spouses/partners spent most of their life in metropolitan area (56% and 52% respectively). A smaller number of all respondents came from a small city or large town – 18% or rural area, small community or town – 23%. Compared to the respondents, a larger number of their spouses/partners spent most of their life in small cities or large towns (18% and 40% respectively).

1.3 Northern exposure

Approximately 38% of the respondents had spent most of their life in northern Ontario, 31% in southern Ontario, 20% in another province or territory, 8% outside Canada, and 3% did not answer. Eighty-two percent of the respondents (n=32) reported that they had spent *some* time in northern Ontario before commencing the residency program. Eighty-four percent (27 of 32) reported that northern experience had had a positive influence on their perception of northern Ontario medical practice (Table 3).

Table 3. Northern Exposure and Perception of Northern Ontario Medical Practice

Survey	Year of entry	Did northern experience have a positive influence?				Total N (%)
		Yes	Possibly	No	Not applicable	
Entry/ Exit	2008& 2006	22(77%)	1(3%)	3(10%)	3(10%)	29(100%)
2-Year/ 5-Year	2004& 2001	5(56%)	0(0%)	1(11%)	4(33%)	10(100%)
Total		27(69%)	1(3%)	4(10%)	7(18%)	39(100%)

A total of 30 northern and rural electives were reported by the four cohorts. Respondents listed the location of up to three electives. Sudbury was the most frequently mentioned northeastern location. Five rural electives were taken outside of Ontario.

Table 4. Northern Elective Locations Reported by Residents and Graduates

Location	N
Northeastern Ontario	16
<i>Sudbury</i>	9
<i>Other NE locations</i>	7
Northwestern Ontario	9
Other Provinces and Territories	5
Total	30

² Eight community size categories from the original data were collapsed into three community categories – (1) metropolitan area includes *metropolitan area* (population 500,000 and more), *large city* (200,000 to 499,999), and *mid-size city* (100,000 to 199,999); (2) small city/large town includes *small city* (25,000-99,999) and *large town* (10,000-24,999), and (3) rural area/ small community or town includes *small town* (population from 5,000 to 9,999), *small community* (2,000-4,999), and *rural area* (less than 2,000) .

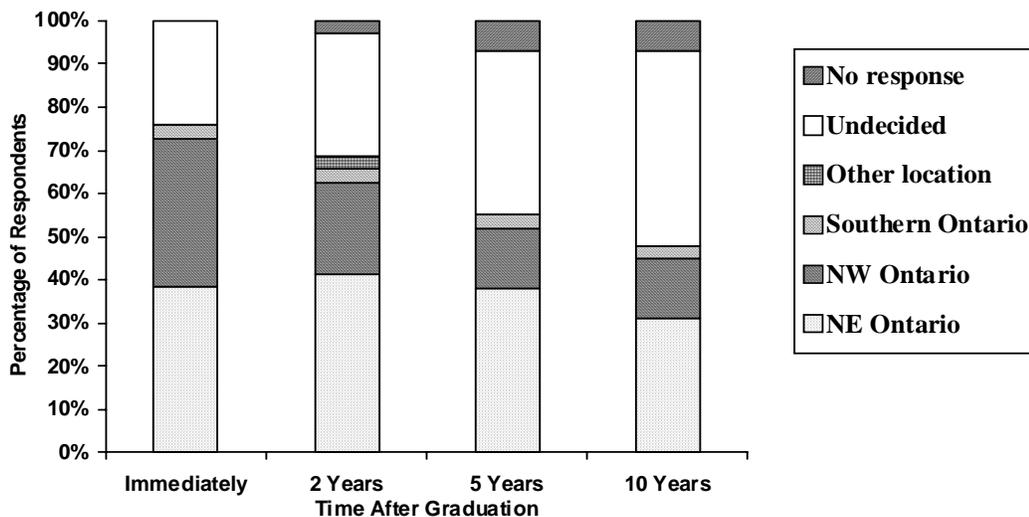
2 Results: Entry and Exit Surveys

Nineteen Entry questionnaires were received from residents who entered the NOSM-FMR Program in 2008. Ten Exit questionnaires were received from residents who entered the program in 2006. The Entry and Exit respondents were from the East (Sudbury) and West (Thunder Bay) campuses. The survey results are analyzed together for both cohorts and differences between the Entry and Exit surveys are presented where appropriate.³

2.1 Intended practice location

The Entry and Exit respondents were asked about *intended practice locations* at four periods of time: immediately after graduation, two, five and 10 years after graduation. Twenty-four percent were undecided about intended practice location immediately after graduation. The number of residents who were undecided about their future practice locations in five or 10 years after the graduation increased to 35% and 45% respectively.

Figure 1
Entry and Exit Respondents' Intended Practice Locations



The number of Entry and Exit respondents who intended to practice in northeastern Ontario was relatively stable: immediately after graduation (38%); two years after graduation (41%); five years after graduation (38%); and ten years after graduation (31%). The number of residents who intended to practice in northwestern Ontario decreased from 34% immediately after graduation to 21% at two years and to 14% at five and 10 years after graduation.

³ Note that with 19 respondents, a change in one answer results in a change of 5.3 percentage points.

2.2 Size of intended practice community

The next set of questions asked the residents about the *size of communities* where they intended to practice. The eight original categories in the questionnaire were collapsed into three: (1) *metropolitan area*, (2) *small city or town*, and (3) *rural area/small community/small town*.⁴

The *metropolitan area* category was then divided into two subcategories – *metropolitan area/large city* (population more than 200,000) and *mid-size city* (population 100,000-199,999), because, interestingly, none of the Entry and Exit respondents planned to practice in large cities at any of the time periods, whereas almost one-third of them intended to practice in each of the three remaining community categories – a *mid-size city* (28-31%), a *small city/large town* (31-34%) and in a *rural area/small community/small town* (24-38%) – across all four time periods of time.

Table 5

Entry and Exit Respondents' Intentions to Practice in Communities of Specified Population Size at Different Time Periods after Graduation

Year after graduation	% of residents intended to practice in:					Total % (n=29)
	Metropolitan area/large city population 200,000 and more	Mid-size city population 100,000 - 199,999	Small city/large town population 10,000 - 99,999	Rural area/small community/ small town population less than 10,000	Undecided/ no response	
Immediate	0	28	31	38	3	100
2 nd	0	31	34	24	10	100
5 th	0	28	31	28	14	100
10 th	0	28	31	28	14	100

2.3 Factors influencing choices of future practice location

The next set of questions asked the Entry and Exit respondents to indicate the importance of several factors that might influence their *choices of future location of medical practice* (Table 6).

Eighty-six percent of the respondents indicated that *Opportunity for a variety of medical experiences* and *Quality of the physical environment in the area* would have an “Extremely important” or “Very important” influence on their future location of practice. Almost 80% indicated *Lifestyle of the Community* and *Adequate on-call coverage* as “Extremely important” or “Very important”.

⁴ See footnote on p. 3.

For over 70% of the respondents, *Cultural and recreational opportunities* (76%), *Availability of hospital facilities/services* (76%), and *Influence of spouse/partner* (72%), would have an “Extremely important” or “Very important” influence on the future location of practice. *Influence of spouse/partner* was “Extremely important” or “Very important” for all married respondents and *Quality of education for children* was “Extremely important” or “Very important” for 69% of married respondents.

In contrast, *Availability of CME opportunities*, *Opportunity of career advancements*, and *Income potential* were least likely to be chosen as “Extremely important” or “Very important” factors.

Table 6. Importance of Factors in Influencing Future Medical Practice Locations Reported by Entry and Exit Respondents (n=29)

Factors influencing future medical practice location	“Extremely/very important” ^A	
	N	%
Opportunity for a variety of medical experiences	25	86
Quality of the physical environment in the area	25	86
Lifestyle of the community	23	79
Adequate on-call coverage	23	79
Cultural and recreational opportunities	22	76
Availability of hospital facilities/services	22	76
Influence of spouse/partner ^B	21	72
Proximity to friends/colleagues	20	69
Medical needs in community	19	66
Proximity to extended family/relatives	18	62
Quality of education for children ^C	15	52
Previous contacts with healthcare professionals in the community	15	52
Size/population of community	14	48
Previous medical practice in community (e.g., electives, locums)	12	41
Bursaries/incentive program’s return-of-service requirements	12	41
Access to specialists for consultation	11	38
Availability of CME opportunities	11	38
Opportunity for career advancement	6	21
Income potential	5	17

^A Other possible responses included “Important”, “Somewhat important”, “Not important”

^B This factor was “Extremely/Very important” for 100% of married respondents (n=16)

^C This factor was “Extremely/Very important” for 69% of married respondents (n=16)

2.4 Interest in additional residency training

The Entry and Exit respondents were asked to indicate their future *interest in additional residency training* after the family medicine residency program. Thirty-four percent of the respondents said they were interested in a third year of residency, 38% indicated a possible interest, and 28% reported no interest.

The most frequently selected areas of additional training were: *Emergency medicine* (60%), *Additional experience in obstetrics* (50%), *Preparation for rural practice* (35%) and *Emergency Medicine, full year* (35%). Some Entry respondents added *Palliative Care* as possible area of interest for additional training. No interest was reported for *Preparation for research in family medicine* (Table 7).

Table 7
Areas for a Possible Third Year of Residency Training by Entry and Exit Respondents^{A, B}

Area of possible third year residency training	Responses	
	N	%
Emergency medicine	12	60
Additional experience in obstetrics	10	50
Preparation for rural practice	7	35
Emergency medicine: full year	7	35
Preparation for remote practice	6	30
Preparation for educational role in family medicine	4	20
Anaesthesia: full year	4	20
Additional experience in behavioural sciences	3	15
Additional experience in geriatrics	2	10
Additional experience in surgery	1	5
Preparation for research in family medicine	0	0
<i>Other</i> (write-in response)		
Palliative Care	4	20

^A Multiple responses were permitted.

^B Applicable to the residents who indicated an interest in a third year of residency training (20 respondents or 72% of total number of Entry and Exit respondents).

2.5 Components of practice: interest and plans

The respondents were also asked about *interests* in various components of medical practice and *plans* to include these components in future practice. Table 8 (on next page) shows that the degree to which the Entry and Exit respondents planned to include each practice component in their future medical practice was very close to their levels of interest. Most Entry and Exit respondents indicated the highest degree of interest and intention to include the following components in their practice: *Health Maintenance/Promotion* (62%), *Obstetrics – Prenatal Care* (52%) and *Emergency Care* (52%).

Table 8
Entry and Exit Respondents' Interests and Plans to Include Practice Components in their Medical Practice (n=29)

Practice components ^A	Strong interest in	Strong intention to include in practice
Health maintenance/promotion	62	62
Emergency care	52	48
Obstetrics - prenatal care	52	45
Adult medicine	48	48
Well baby and child care	45	38
Surgery – minor procedures	41	34
Obstetrics – labour and delivery	38	28
Teaching/preceptor	34	34
Gynecology	34	28
In-patient hospital care	28	28
Care of ill children	24	24
Assisting surgery – minor procedures	24	21
Assisting surgery – major procedures	21	17
Geriatrics/care of aged	21	17
Counselling/psychotherapy- individual	14	10
Surgery – major procedures	14	3
Anaesthesia	10	10
Counselling/psychotherapy- couple/family	7	3
Occupational health	3	3

^A Ranked by the percentage of Entry and Exit respondents who chose “Strong Interest”.

When asked to explain discrepancies between interests and plans for future medical practice, the respondents provided different answers, but they all referred to factors beyond their control which either limited their interests or made some practice components not avoidable in reality. For example:

“I will not be able to practice OB in the community where I will be working”;

“Interest in OB is high but a degree to which it will be included into my practice depends on practical/logistical issues”;

“It is not feasible to include all interests in practice”;

“I am not interested in geriatrics as in other parts of medicine, but realize it will be a part of my practice”;

“Occupational health and counselling cannot be avoided regardless of my interest”;

“Don’t like OB/gynaecology but as a female MD I don’t think I’ll get away with not including OB/gynaecology in my practice”.

3 Results: 2-Year and 5-Year Follow-up Surveys

The 2-Year Follow-up questionnaires were sent to 12 physicians who entered the NOSM-FMR Program in 2004 and had been practising for *two* years since completion of the residency program in 2006. The 5-Year Follow-up questionnaires were sent to 18 physicians who entered the program in 2001 and had been practising for *five* years since their graduation in 2003. Two physicians replied to the 2-year Follow-up Survey (response rate 17%) and 8 physicians replied to the 5-year Follow-up Survey (response rate 44%).

The two follow-up questionnaires contained identical questions with the exception of a set of questions concerning the assessment of educational preparation for practice.⁵ Because of the small number of respondents, the responses from both cohorts are analyzed together.⁶

3.1 Medical education and career path after residency training

After completing the two-year residency program, 40% of the graduates took additional post-graduate training in the following areas: *Emergency Medicine, Anaesthesia,* and *Radiology*. Nine of 10 graduates reported that they had obtained their CCFP/MCFP certification.

Sixty percent of the graduates began medical practice in their graduation year and 40% started in the following year. Since then, 30% of all respondents had been practicing in the same community, 20% had changed practice location once or twice, and 50% had changed practice location three or more times (Table 9). One common reason for leaving a community was “working as a *locum tenens*,” though one graduate moved to another community in order to be closer to the family and two graduates were “not happy with practice setting” or “overworked”.

Table 9
Graduates’ Practice Location Changes
Since Graduation from the NOSM-FMR Program

Number of practice locations since graduation	Graduates	
	N	%
One	3	30
Two	1	10
Three	1	10
More than 3	5	50
Total	10	100

⁵ The assessment of NOFM educational preparation for practice is not reported due to the small number of respondents.

⁶ With 10 respondents, a change in one answer results in a change of 10.0 percentage points.

One half of the respondents were practicing in Ontario at the time of the survey and another half were practicing in other provinces. Seventy percent of all respondents were practicing in *rural area/small community/town* (population less than 10,000) or *large towns/small cities* (population 10,000 - 99,999). Another 30% of the respondents were practicing in *large cities* or *metropolitan area* (population more than 200,000) and none of the respondents were practicing in *midsize cities*.

Forty percent of the respondents planned to stay in their current community for six years or more, 40% planned to leave within 2 to 5 years, and the remaining 20% did not know how long they would stay in the current community. All respondents who planned to leave their current community intended to relocate to a community of a similar size.

3.2 Practice profile

The surveyed graduates worked in a variety of settings but not in solo practice, locum tenens, and public health (Table 10).

Table 10
Practice Characteristics of 2-Year and 5-Year Graduates (n=10)

Practice characteristics	Percentage of graduates ^A
Group practice (2 physicians)	30
Teaching/research	20
Resident	20
Administration	20
Group practice (3-5 physicians)	10
ACU/walk-in clinic	10
Group practice (6 or more physicians)	10
Hospital-based practice	10
House-call services	10
Solo practice	0
Locum tenens	0
Public health	0

Table 11 shows that the graduates offered a broad range of medical services. Sixty percent of the respondents saw patients in their offices and regularly worked in walk-in clinics. Forty percent provided palliative care in hospital or at patients' homes and regular coverage in emergency departments. In contrast, none of the graduates looked after patients with physical or developmental disabilities, provided on-call coverage for other services or occupational health services in factory or workplace or provided other forms of therapy.

Table 11
Medical Services Offered by 2-Year and 5-Year Graduates ^A

Medical Service	Percentage of graduates (n=10)
See patients in office	60
Regular work in walk-in clinics or after-hour clinics	60
Palliative care in hospital or at patients' homes	40
Regular coverage in emergency departments	40
Hospital in-patient care as attending physician	30
Psychotherapy and counseling	30
Regular care for patients in nursing homes, etc.	30
On-call coverage for a hospital	20
Regular home visits for patients	20
Regular newborn care in hospital	20
On-call coverage for a group	20
Work regularly in operating room as an assistant	20
On-call coverage for a practice	10
Full obstetrical care (excluding delivery)	10
Full obstetrical care (including delivery)	10
Work regularly in operating room as an anesthetist	10
Work regularly in operating room as a surgeon	10
Look after patients with physical or developmental disabilities	0
On-call coverage for other services (e.g., palliative care, obstetrics)	0
Occupational health services in factory or workplace	0
Other forms of therapy	0

^A Multiple responses were permitted.

When asked how they were reimbursed for patient care services, 90% of the graduates indicated that some or all of their income came from fee-for-service payment, 30% received sessional/hourly payment, 20% received capitation payment, 20% received salary, and 30% received payments for other services (e.g., on-call stipend). These remuneration methods were not mutually exclusive.

In terms of work load, the graduates typically worked 44-48 weeks per year providing medical care, ranging from a low of 35 weeks to a high of 49 weeks per year. The graduates saw approximately 22 patients in an average working day. Sixty percent of the graduates did on-call, with 50% of them working less than 50 on-call hours and 50% working between 50 and 100 on-call hours in a typical month.

Table 12 shows the distribution of the graduates' working hours across various professional activities. They spent most of their working time on *Caring for patients in an office or clinic* (mean = 14.5 hours/week), followed by working as an *Attending physician in Emergency department* (5.4 hrs/wk), on *Indirect patient care* (5.2 hrs/wk), and *House calls* (3.3 hr/wk). Other professional activities took three or less hours per week.

Table 12
Distribution of the 2-Year and 5-Year Graduates' Working Time
on Various Professional Activities

Professional activity	Hours per week Mean
Direct patient care in office/clinic	14.5
Emergency department as MD on duty	5.4
Indirect patient care (e.g., phone calls, reviewing lab work and consultation reports, requests for consultation)	5.2
House calls	3.3
Hospital in-patient care	3.0
Continuing medical education (e.g., courses, journal reading, video, Audio tapes)	2.0
In-patient care in other types of institutions (e.g., nursing homes, Rehab facility)	0.8
Managing own practice (e.g., supervising staff, non-clerical work)	0.5
Other professional activities (e.g., involvement with professional organizations)	0.3
Research-related activities	0.2
Teaching (e.g., teaching medical students or residents)	0.1
Administration activities (e.g., hospital committees, management of university programs)	0.1
Emergency department to manage own patients only	0.0

3.4 Practice environment

The 2-Year and 5-Year graduates were asked to rank the importance of factors in influencing their choices of *current medical practice location* by using a 5-point scale ranging from “Not important” to “Extremely important”.

Table 13 shows that the most frequently selected “Extremely important” or “Very important” factors were: *Lifestyle of the community* (80%), *Influence of a spouse/partner* (70%), *Quality of the physical environment in the area* (70%), and *Proximity to extended family/relatives* (70%). Factors that were chosen least often as “Extremely important” or “Very important” included: *Bursaries/incentive program’s return-of-service requirements* (10%) and *Availability of CME opportunities* (0%).

Table 13

Importance of Factors in Influencing Respondents' Choices of Practice Location Reported by 2-Year and 5_year Respondents (n=10)

Factors influencing location of medical practice	"Extremely/very important"^A
Lifestyle of the community	80
Influence of spouse/partner^B	70
Quality of the physical environment in the area	70
Proximity to extended family/relatives	70
Adequate on-call coverage	60
Availability of hospital facilities/services	60
Opportunity for a variety of medical experiences	50
Previous contacts with healthcare professionals in the community	40
Previous medical practice in community	40
Proximity to friends/colleagues	40
Quality of education for children ^C	30
Size/population of community	30
Cultural and recreational opportunities	30
Access to specialists for consultation	30
Medical needs in community	20
Income potential	20
Opportunity for career advancement	20
Bursaries/incentives/return-of-service requirements	10
Availability of CME opportunities	0

^A Other possible responses included "Important", "Somewhat important", "Not important"

^B This factor was "Extremely/Very important" for 78% of married respondents (n=9)

^C This factor was "Extremely/Very important" for 33% of married respondents (n=9)

Eighty percent of the 2-Year and 5-Year graduates practiced in a community with at least one hospital. Almost one-third of the graduates (30%) practiced in a community that was more than 100 km away from a referral hospital (with a maximum distance of 300 km).

Eighty percent of the graduates maintained hospital privileges with 70% having active hospital privileges and 10% having courtesy privileges.

Seventy percent of the graduates rated the willingness of other family physicians to accept new patients as "Poor". Table 14 shows the graduates' perceived availability of various specialist services within 50 km of their community as "Very good" or "Excellent".

Table 14
2-Year and 5-Year Graduates' Rating of the Availability of Specialist Services (n=10)

Availability within 50 km of graduates' practice location:	"Excellent/very good"
Diagnostic services	50
Anaesthesia	40
Emergency room services	30
Hospital beds	30
Physiotherapy	30
Obstetrics and gynaecology	20
Community nursing services	20
Orthopaedic surgery	20
Specialist physician services in general	10
Occupational therapy	10
Psychiatry	10
Long-term care beds	10

3.5 Graduates' satisfaction with current medical practice

Overall, 80% of the respondents were satisfied with their current medical practice. Among them, 20% were "*Extremely satisfied*" and 60% were "*Somewhat satisfied*". Table 18 (on next page) shows the proportion of the respondents who were "*Extremely satisfied*" with different aspects of their medical practice.

More than 50% of the respondents were "Extremely satisfied" with *Quality of the physical environment* (70%) and *Lifestyle of the community* (60%). Fifty percent of respondents were "Extremely satisfied" with *Quality of education for children* and *Opportunities for CME*. Forty-four percent of the graduates who had spouses/partners were "Extremely satisfied" with job career opportunities for their spouses/partners.

In contrast, only 10% of the respondents were "Extremely satisfied" with *Work load*, *Opportunity for career advancement*, *On-call coverage*, and *Availability of professional back-up*. None of the respondents were "Extremely satisfied" with *Government health care policies*.

Table 15. Graduates' Satisfaction with Current Medical Practice and Community

Aspects of medical practice	% of "extremely satisfied" with the aspect (n=10)
Quality of the physical environment in area	70
Lifestyle of the community	60
Opportunities for CME	50
Job career opportunities for spouse ^B	40
Opportunity for varied medical experiences	40
Availability of recreational activities	40
Working relationships with fellow physicians	40
Availability of cultural activities	40
Professional income	30
Proximity to extended family/relatives	30
Spouse's contentment in community	20
Quality of education for children ^C	20
Working relationships with hospitals	20
Ability to cope with medical practice and personal life	20
Availability of hospital facilities	20
Availability of professional back-up	10
On-call coverage	10
Opportunity for career advancement	10
Work load	10
Government health care policies	0

^A Other possible responses included "Somewhat satisfied", "Somewhat dissatisfied", "Extremely dissatisfied"

^B Forty-four percent of married respondents were "extremely satisfied" with this aspect (n=9)

^C Fifty percent of respondents with children were "extremely satisfied" with this aspect (n=4)

4 Summary

In 2008, 73 survey packages were sent to new residents, about-to-graduate residents and graduates of the Northern Ontario School of Medicine Family Medicine Residency Program with invitation to participate in the multi-year FMR Tracking Study. The overall response rate was 53%. The study asked a series of questions to determine the influence of various factors on residents' and graduates' choices of practice location, career plans, their further medical education needs and perceptions of the program strengths in preparing them for medical practice.

4.1 Highlights of the 2008 FMR-TS survey results

- **Demographic profile of the respondents.** Of all respondents, about 41% were male and 59% were female. Sixty-four percent were married and 31% were single at the time of the survey. Fifty-six percent of the respondents spent most of their life in metropolitan areas, 23% in rural areas/small communities/towns, and 18% in small cities or large towns.
- **Northern exposure.** Approximately 40% of the respondents reported growing up in northern Ontario and 82% of the respondents had spent some time in northern Ontario before commencing the NOSM-FMR program. Eighty-four percent of these respondents thought that their northern experience had had a positive influence on their perception of northern Ontario medical practice.
- **Intended practice location.** Seventy-two percent of the Entry and Exit respondents intended to practice in northern Ontario after graduation, 24% were undecided about future practice location, 3% intended to practice in southern Ontario and none intended to move to other provinces.
- **Intended size of practice community.** None of the Entry and Exit respondents intended to practice in *metropolitan area*, about one-third of the respondents planned to practice in a *mid-size city*, another one-third in *small cities or large towns*, and 38% of the respondents intended to practice in *rural areas/small communities/small towns*. Only 3% of the respondents were undecided about practice locations immediately after graduation.
- **Current practice location.** Thirty percent of the 2-Year and 5-Year graduates had been practicing in the same community for 1-5 years since graduation. Fifty percent of the respondents were practicing in Ontario and fifty percent outside the province. Seventy percent of all respondents were practicing in *rural areas/small communities/towns* (population less than 10,000) or *large towns/small cities* (population 10,000 - 99,999). Another 30% of the respondents were practicing in *large cities* or *metropolitan areas* (population more than 200,000) and none of the respondents were practicing in *midsize cities*.

- **Factors influencing practice location choices.** The two most important common factors for both Entry/Exit and 2-Year/5-Year respondents were: *Lifestyle of the community* and *Quality of the physical environment in the area*. *Opportunity for a variety of medical experiences* and *Adequate on-call coverage* were next most important factors for Entry/Exit respondents while for 2-Year/5-Year respondents the next most important factors were *Influence of spouse/partner* and *Proximity to extended family/relatives*.
- **Medical education after the NOSM-FMR program.** Seventy-two percent of the Entry and Exit respondents expressed an interest in a third-year residency training in *Emergency medicine*, *Obstetrics*, and *Preparation for rural practice*. Among the graduates, only 40% took additional training in *Emergency Medicine*, *Anesthesia*, and *Radiology*. Ninety percent of the graduates had obtained CCFP/MCFP certification.
- **Practice environment.** Eighty percent of the respondents practiced in a community with at least one hospital and about 30% practiced in communities located more than 100 km away from a referral hospital (maximum reported distance of 300 km). Less than half of the graduates rated the availability of *Anaesthesia* (40%) and *Emergency room services* (30%) within 50 km of their community as “Very good” or “Excellent”. Seventy percent of the graduates rated the availability of family physicians to accept new patients as “Poor”.
- **Current medical practice profile of the graduates:**
 - typically worked 44-48 weeks each year;
 - 50% worked in group practice and none worked in solo practice, locum tenens or public health;
 - 15 hours/week spent caring for patients in their offices/clinics and 5 hours/week in emergency departments as attending physicians;
 - saw about 22 patients in an average working day;
 - 50% of graduates worked more than 50 on-call hours during a typical month;
 - all graduates received payments from multiple sources, i.e. 90% billed fee-for-service, 30% received sessional/hourly payment, 20% received capitation payments, 20% were salaried, and 30% received payments from alternative funding plans.
- **Hospital privileges.** Eighty percent of the graduates maintained hospital privileges -- of which 70% had active hospital privileges and 10% had courtesy hospital privileges.
- **Graduates’ satisfaction with medical practice.** Overall, 80% of the graduates were satisfied with their current medical practice, with 20% “Extremely satisfied” and 60% “Somewhat satisfied”. Most of the graduates were “Extremely satisfied” with *Quality of physical environment* (70%) and *Lifestyle of the community* (60%). None were “Extremely satisfied” with *Government health care policies* and only 10% were “Extremely satisfied” with *Work load*, *Opportunity for career advancement*, and *Availability of professional back-up*.

4.2 Limitations and potentials

There are some limitations in this study as it relies on self-reported data, which may be subject to recall bias, social desirability bias, etc. Nonetheless, the consistency of most of the responses suggests that the results are generally trustworthy within the constraints imposed by survey method.

In view of the relatively small number of residents in each cohort, with possible random variations in some responses, it is important to extend the duration of the tracking study with a view to reducing random variation by combining respondents from different cohorts. It is also important to be able to track changes over time. In addition, the ability to more appropriately interpret the survey data could be strengthened by conducting in-depth interviews with some of the residents and graduates.

Appendix A Survey Methodology

The Family Medicine Tracking Study was initiated in 1993 with the intent to survey residents upon Entry into the program, Midway (at the end of the first year), upon Exit from the program and 1, 2 and 5 years after graduation. The tracking study was suspended in 1997 for a variety of reasons.

The study was resumed in March 1999 with a revised methodology and questionnaires. The Midway survey was eliminated as responses were found to be similar to responses in the Entry or Exit surveys. The 1-Year Follow-up survey was dropped, because graduates were typically mobile in the first year after graduation, and responses were believed to be highly variable without being informative. Dropping the Midway and 1-Year Follow-up surveys also reduced the number of surveys that residents and graduates had to complete, with the intent that this might improve response rates for the remaining surveys.

In 2006, the Northern Ontario School of Medicine (NOSM) assumed responsibility for the NOFM Program in Sudbury and the Family Medicine North Program in Thunder Bay. The tracking study was expanded in July 2006 to include Family Medicine residents and graduates at the NOSM West campus (Lakehead University) and NOSM East campus (Laurentian University).

Surveys are typically administered in June to August of each year to residents and graduates. The survey schedule requires that four separate questionnaires be sent to:

- Residents who are entering the program (Entry Survey, July);
- Residents who are about to graduate (Exit Survey, June);
- Physicians who graduated two years ago (2-Year Follow-up Survey, August);
- Physicians who graduated five years ago (5-Year Follow-up Survey, August).

Realized and Proposed Timeframe for the Family Medicine Tracking Study^{A,B}

<i>Year of Entry</i>	1994	1995	1996	1997 ^C	1998 ^D	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
1991	<u>1</u>	<u>2</u>			<u>5</u> *										
1992	<u>X</u>	<u>1</u>	<u>2</u>			<u>5</u>									
1993	<u>M</u>	<u>X</u>	<u>1</u>				<u>5</u>								
1994	<u>E</u>	<u>M</u>	<u>X</u>		<u>2</u> *			<u>5</u>							
1995		<u>E</u>	<u>M</u>			<u>2</u>			<u>5</u>						
1996			<u>E</u>		<u>X</u> *		<u>2</u>			<u>5</u>					
1997						<u>X</u>		<u>2</u>			<u>5</u>				
1998					<u>E</u> *		<u>X</u>		<u>2</u>			<u>5</u>			
1999						<u>E</u>		<u>X</u>		<u>2</u>			<u>5</u>		
2000							<u>E</u>		<u>X</u>		<u>2</u>			<u>5</u>	
2001								<u>E</u>		<u>X</u>		<u>2</u>			<u>5</u>
2002									<u>E</u>		<u>X</u>		<u>2</u>		
2003										<u>E</u>		<u>X</u>		<u>2</u>	
2004											<u>E</u>		<u>X</u>		<u>2</u>
2005												<u>E</u>		<u>X</u>	
2006													<u>E</u>		<u>X</u>
2007														<u>E</u>	
2008															<u>E</u>

^A Surveys that have been conducted are underlined.

^B Surveys include **E** = Entry, **X** = Exit, **M** = Midway (discontinued), **1** = 1-Year Follow-up (discontinued), **2** = 2-Year and **5** = 5-Year Follow-up.

^C Survey was not conducted in 1997.

^D The 1998 surveys were conducted retroactively in 1999 (denoted in the table with an asterisk).

In previous years the survey packages were distributed by NOSM-FMR Program staff. Since 2006, CRaNHHR handled all survey administration and processing duties. All completed questionnaires were returned directly to CRaNHHR to ensure privacy protection. There were three mail-outs to encourage a high response rate.

A typical survey package includes:

- Cover letter signed by the Program Director, NOSM;
- Consent form to be signed by resident/graduate and returned to CRaNHHR;
- Questionnaire (either Entry, Exit, 2-Year Follow-up or 5-Year Follow-up);
- Map of Ontario showing geographic regions;
- Demographic information questionnaire;
- Business-reply envelope (addressed to CRaNHHR).

Since 2000, Family Medicine graduates who have submitted the full *Demographic Information* questionnaire are sent the *Changes in Demographic Information* questionnaire. The full *Demographic Information* questionnaire will be sent to new residents and those graduates who have not yet completed this questionnaire.

The study manual “*Tracking Study Procedure Manual*” was developed in 2007 to provide details of survey administration, processing, analysis, and general reporting. The manual is available in paper and electronic format.

Copies of the questionnaires can be obtained from the Centre for Rural and Northern Health Research (CRaNHR):

- Demographic Information (as of 1999, 2000)
- Changes in Demographic Information (as of 1999, 2000)
- Entry/Exit Questionnaire (as of 1999, 2000)
- 2-Year Follow-up Questionnaire (as of 1999, 2000)
- 5-Year Follow-up Questionnaire (as of 1999, 2000)