October 2018

Transitions in Medical Education

Britta Laslo
The University of Western Ontario

Supervisor
Brown, Judith B.
The University of Western Ontario

Co-Supervisor
Freeman, Thomas R.
The University of Western Ontario

Graduate Program in Family Medicine

A thesis submitted in partial fulfillment of the requirements for the degree in Master of Clinical Science

Abstract

Transitions in medical education have been shown to increase unprofessional behaviours in learners but little is known about the experiences of first year Canadian Family Medicine residents or their preceptors. This qualitative descriptive study explored the experiences and feelings of Family Medicine preceptors and first year Family Medicine residents (FMRs) surrounding the transition to residency. Semi-structured interviews were conducted with 10 preceptors and 9 FMRs. The findings highlighted the complex but predominantly positive experiences during this transition in addition to competing and often evolving feelings experienced by both groups. Both studies noted the lack of support for preceptors and FMRs during transitional times and the importance of a learner-centered approach to transitions with an emphasis on peer and early, meaningful Family Medicine connections. These findings generate learner-centered recommendations that may help to decrease the development of unprofessional behaviours and may improve patient safety and care.

Keywords

Medical education, transitions, Family Medicine preceptors, Family Medicine residents, learner-centered approach

Co-Authorship Statement

The thesis was conceived, planned, conducted and reported by the author.

The following contributions were made:

Drs. Judith Belle Brown and Thomas R. Freeman supervised the thesis project, guided the development and revision of the research question and methodology, participated in data analysis and interpretation of all interviews, and contributed to manuscript revisions.

Acknowledgments

I would like to thank Dr. Eric Wong who sparked and kindled my interest in medical education during my postgraduate Family Medicine training. Dr. Wong's passion for teaching is inspirational and his learner-centered approach in medical education is one that I continue to emulate and aspire towards.

I would also like to thank my thesis Supervisors Drs. Judith Belle Brown and Thomas R. Freeman who stuck with me through the journey of the thesis and pulled me back on track when I repeatedly lacked a muse for months! All of your support, guidance, mentorship and enthusiasm has been remarkable and greatly appreciated. Thank you for guiding me in this, slightly longer than expected, journey of qualitative discovery!

Lastly I would like to thank Ms. Liz McInnis for her administrative support. Liz, your perseverance with logging my supervisor meeting dates, reminding me to pay my tuition fees (!) and technological support did not go unnoticed. Thank you for keeping me in line over the past five years.

Table of Contents

List of Tables

List of Appendices

Chapter 1

1 Introduction

Transitions in medical education have been a renewed source of interest for researchers over the past decade. The definition of a transition remains contested even amongst experts in the field; however, for the purpose of this study, the "dynamic movement across different expectations, tasks and responsibilities" (pg. 12) (1) will be used to best describe "transition" in the continuum of medical education. The continuum of medical education provides many transition periods for students and residents (2). These transition periods have been shown to be associated with personal negative consequences such as a sense of poor preparedness (3) confusion, uncertainty, demotivation and stress (2). In addition, the literature has also shown that transition periods in medical education are associated with poor patient care (4). These areas include a focus on work efficacy over patient-centeredness, lying about or withholding relevant patient information from preceptors, and increased "turfing" behaviour where learners work to avoid necessary admission to their service or attempt to block admission to the hospital (4).

Given the significant negative personal and patient outcomes associated with transitions in medical education, there has been a push to re-examine previously accepted norms of training. The long-time accepted transition based approach to medical education, originally described by Flexner in 1910 (5), focused on service-based, teacher-centered rotations with a clear focus on process and structure. This model had been considered the norm in the landscape of medical education despite lack of evidence to support its basic tenets and principles. In recent decades, researchers have begun to question the Flexnerian approach to medical education due to emerging evidence around transitions and structure in medical education. The study of the effects of frequent rotations and

hidden agendas in medical education are two areas which contribute to poor patient care and are under critical review. Firstly, the use of frequent rotation changes, where learners change service and/or work location every 2-6 weeks, across undergraduate and postgraduate education (1,4) focuses more on providing a service to the hospital to ensure smooth operation instead of providing healthy educational opportunities appropriately suited for learners. Hidden agendas such as learned unprofessional behavior are reflected in turfing or blocking admission to hospital encouraged by senior learners or supervising staff (4). These behaviours are common in the socialization of medical trainees and encourage poor patient care (4). Despite movement to redesign and better understand the hidden agenda of medical curricula (1), the in-depth experiences of residents and their primary preceptors as the active players in transitions have not been explored in much detail. Gaining a greater understanding of the experiences of residents and their clinical preceptors will help curriculum planners in designing curricula that may promote learning, the development of professional behaviours, and may improve patient care.

1.1 Thesis Purpose

The transition from final year medical student to first year resident is arguably one of the most significant transitions in the medical education trajectory and thus has been chosen as the transition in question for this study. The experiences of this transition in the shortest post-graduate medical training program in Canada will provide unique insights to increase our understanding of this experience.

1.2 Thesis Design

This research project is comprised of two studies as part of a qualitative thesis exploring transitions in medical education. Research was conducted in two phases with Study One informing Study Two. Study One consisted of participants who are clinical Family Medicine preceptors at Western University in London, Ontario. Study Two consisted of residents in their first year of Family Medicine residency at Western University.

1.3 Thesis Structure

This thesis explored the feelings and experiences of first year FMRs and clinical preceptors who actively supervise FMRs during the transition from final year medical student to first year FMR.

This chapter provides a background of transitions in medical education and outlines some of the negative effects, on learners and patients, associated with such transitions. Furthermore a brief introduction to the purpose of the thesis and its design are detailed.

Chapter two will review the literature on transitions including sentinel ideas on transitions in industrial and organizational psychology and the literature on transitions in medical education. The medical education literature provides insight into the following transitions: from non-clinical to clinical medical student, from final year medical student to first year resident trainee (commonly referred to as "junior doctor" in the United Kingdom), and from resident trainee to independent practitioner (also referred to as consultant).

Chapter three will detail the study methodology used in both descriptive qualitative studies.

Chapter four will report the findings from Study One, whose purpose was to explore the experiences and feelings surrounding the transition from final year medical student to first year FMR from the perspective of Family Medicine clinical preceptors. Three key themes emerged in the data analysis: 1) preceptor experiences with transition (which included three subthemes: the learner-preceptor relationship (LPR), the importance of colleagues and peer mentorship and preceptors' own experiences with transitions), 2) preceptor feelings during transition and 3) the evolving learner.

Chapter five will report the findings from Study Two, whose purpose was to explore the experiences and feelings surrounding the transition from final year medical student to first year FMR from the perspective of first year FMRs. The findings discovered that FMRs viewed this transition as a complex but predominantly positive experience. FMRs

also described having evolving, but often competing, positive and negative feelings during this transition in addition to navigating an important professional transition that occurs as a first year FMR. Importantly participants expressed experiences and feelings about their lack of connection to the Family Medicine postgraduate program and the Postgraduate Program at large. They provided suggestions to improve this transition for future FMRs.

Chapter six will integrate the findings from chapters four and five and discuss similar themes as well as differences that emerged between the two studies. Moreover, recommendations for curriculum developers, postgraduate department chairs and clinical preceptors will be outlined as potential ways to facilitate and better support FMRs going through the transition from final year medical student to first year residency.

Chapter 2

2 Literature Review

2.1 What are Transitions?

2.1.1 Transitions in the Social Sciences Literature

Literature exploring transitions in the social sciences has provided important insights into personal transitions over the second half of the 20th century while industrial and organizational (I/O) psychology research has provided influential ideas in workplace and professional transitions. Both the social sciences and I/O psychology literature have informed research around transitions in medical education. Given the robust amount of psychological literature available for review, three theorists have been chosen for further review for the purpose of this thesis on transitions in medical education.

Seminal theories and ideas include Erik Erikson's Theory of Psychosocial Development, Nigel Nicholson's Theory of Work Role Transitions in the 1980s, and Elizabeth Wolfe Morrison's insights from organizational psychology in the 1990s.

2.1.2 Erik Erikson's Theory of Psychosocial Development

Erik Erikson's groundbreaking work provides an initial framework for understanding psychosocial development. Psychosocial development is arguably the basis of identity formation that shapes personal and occupational transitions throughout an individual's life. Erikson's work described eight stages of ego growth (6,7). These stages occur chronologically and each involves a *psychosocial crisis* where the individual must work through crisis and evolve within their own social milieu (7). His work heavily emphasizes the relationship between the individual and society in contrast to work by other pioneers in the field of identity formation (6,7).

In late adolescence Erikson describes the psychosocial crisis of *identity* versus *identity diffusion* (or identity confusion in Erikson's later writings) (6–8). It is during this stage

where individuals have to confront the crisis of adult tasks such as choosing an occupation and preparing for marriage while being able to integrate childhood experiences and personal identifications into their view of themselves as a part of adult society (7). By the end of the late adolescent crisis Erikson believes that adolescents should have overcome the crisis of choosing an occupation and forming a personally and socially relevant ideology (8). Forming an ideology, according to Erikson, is achieved by integrating significant identifications and consistent roles. This is further clarified in the methods Erikson suggests are used to form such an ideology (8). Psychologists Kroger and Marcia have further described and interpreted Erikson's work exploring identity formation in late adolescence (9). They highlight that in this stage of Erikson's Identity Construct, choosing an occupation requires opportunities of *trial and error* and *reflection* where individuals try out various roles "whereby past patterns are examined, some discarded, and others integrated into a new identity configuration" (pg. 33) (9). Erikson states that after this period of trial and error and reflection there is a final identity:

> The final identity, then, as fixed at the end of adolescence is superordinated to any single identification with individuals of the past: it includes all significant identifications, but it also alters them in order to make a unique and reasonably coherent whole of them (pg. 67-68) (8).

Erikson's work influenced a multitude of psychologists who further explored social identity formation as well as industrial and organizational psychologists in the second half of the 20th century.

2.1.3 Nigel Nicholson's Theory of Work Role Transitions

Nigel Nicholson's work from Cornell University in the United States in the early 1980's provides a theory of work role transitions (10). Nicholson's theory describes the social-organizational process when individuals transition to a new work role.

He describes four interrelated relationships in his theory including three predictor variables: 1) *prior occupational socialization and motivation orientation* ("the character of the person's past socialization into previous work roles" (pg. 172) (10) and the psychological disposition and motives of the person; 2) *organizational induction-socialization processes* ("the form of any current organizational induction or socialization

practices that shape the person's adjustment to the new role" (pg. 173) (10); and 3) *role requirements* (the requirements or responsibilities of the new role) (10). These three predictor variables affect the four *modes of adjustment*: replication, absorption, determination and exploration. These modes of adjustment ultimately provide feedback to the first three variables (10). Nicholson's theory further relates the modes of adjustment to two outcomes of individual adjustment: 1) personal development to absorb new demands and 2) role development (10). To further explain the interconnectedness of his theory Nicholson explores the four modes of adjustment (replication, absorption, determination and exploration) resulting in personal and role development (10).

Replication occurs when the new worker makes very few or no adjustments to his or her identity or behaviour to fit into one's new role (10). An example of a labourer who works on an assembly line who gets transferred to another assembly line where work is similar would likely make very few adjustments to the new work role.

Absorption occurs when transitions require a high degree of learning from the new individual. The worker must assimilate new skills, social behaviours and frames of reference to the organizational context. Social psychologists have explored the socialization of priests and medical students and the important absorption of skills, values and social behaviours in their respective professional fields (10).

Determination is a mode of adjustment where the individual's personal identity affects and shapes their new role. Political ministerial portfolios where an individual succeeds or is transferred into a new role within the government could be an example where the individual's unique identity and skills impact and alters the new role (10).

Exploration is represented in transitions where there is simultaneous change in both the individual's personal qualities and the new role. This transition can be seen in large corporations undergoing restructuring where an individual may be recruited for a certain role given certain expertise sought by the organization. This individual would then simultaneously choose to develop certain professional skills to better fit the expectations of themselves and how they are actively shaping their new role (10).

Nicholson's theory of work role transitions would further influence other theorists in the late 20th- century exploring newcomer and organizational socialization.

2.1.4 Elizabeth Wolfe Morrison's Proactive Newcomer Socialization

Elizabeth Wolfe Morrison's (11) work on newcomer socialization offers further insight into organizational socialization theories as she explores the newcomer as a reactive agent when assuming a new role in an organization. Previous ideas in socialization explored newcomers as non-reactive participants (12,13). Researchers subscribing to this previous school of thought believed that a socialization process would "yield predictable outcomes regardless of variation in raw materials [different types of people]" (pg. 173) (11).

A new perspective in the social sciences was introduced in the late 20th century where researchers acknowledged the more proactive role of a newcomer and produced research on adjustment, coping, communication and feedback seeking (14–18). These researchers, as summarized by Wolfe Morrison, further described four key tasks of the socialization process. These tasks include: "a) task mastery, learning how to perform the component of one's job; b) role clarification, developing an understanding of one's role in the organization; c) acculturation, learning about and adjusting to the organization's culture; and d) social integration, developing relationship with co-workers" (pg. 174) (11).

Wolfe Morrison's work further expands on these ideas while exploring *proactive information seeking* as a way to reduce uncertainty about a new role, to better understand the new role and work towards role mastery (11). Information seeking includes seeking clarification and feedback from both peers and supervisors both in written and verbal forms (11). Wolfe Morrison's work reveals that proactive newcomer information seeking had an effect on three out of the four tasks of the organizational socialization process: task mastery, role clarity and social integration (11). Acculturation was not affected by information seeking and Wolfe Morrison hypothesizes that various organizational-led initiatives such as formal orientation programs, mentoring and the development of informal social support systems have a greater impact on the task of acculturation (11).

While the I/O transition literature is robust and has been expanding since the mid 20th century, the literature on transitions in medical education has only been building over the past 10-15 years. Researchers in Denmark, the Netherlands and the United Kingdom have provided important new research, reviews and critiques of the transitional landscape in medical education and will be reviewed in detail in the next section.

2.2 Transitions Throughout the Medical Education Continuum

2.2.1 Definition of Transition in the Medical Education Literature

The literature on transitions in medical education provides various definitions of "transition." A widely accepted definition is "the dynamic movement across different expectations, tasks and responsibilities" (pg. 12) as described by Ringsted (1). Others have described this event as "a period of change in which medical students or medical doctors experience some form of discontinuity in their professional life space, forcing them to respond by developing new behaviors or changing their professional life space in order to cope with the new situation" (pg. 374) (19). Teunissen and Westerman (2) have further defined transition as "not a moment, but rather a dynamic process in which the individual moves from one set of circumstances to another" (pg. 52) (2). Such circumstances could include changes in tasks or responsibilities and then require coping strategies to be able to "function competently in a new environment" (pg. 52) (2).

Researchers have consistently referred to the origins of transitions in medical education to the Flexner report, written by Abraham Flexner in 1910 (5), on the state of medical education in Canada and the United States (5). Flexner's report was written as the scientific method was being adopted into modern medicine and the biomedical model was being expanded. Flexner suggested that students should be properly trained in "formal analytic reasoning" during a pre-clinical stage and then training should be followed by a clinical phase of training in teaching hospitals (5). According to Flexner, students would learn how to collect and interpret clinical data from patients under the supervision of clinicians (5). Flexner also had the foresight to see that as the biomedical model was adopted and scientific knowledge continued to grow, there would be

additional need and demand for training in subspecialties of medicine (2). This led to the creation of multiple transitions in postgraduate medical training.

2.2.2 Types of Transitions in Medical Education

A literature review compiled by Teunissen and Westerman in 2011 (2) revealed three distinct medical transitions within the continuum of medical education. These include the transition from non-clinical to clinical medical student, 2) from medical student to resident (commonly referred to as "house officer" or "junior doctor" in the United Kingdom), and, 3) resident to independent medical practitioner (commonly referred to as "certified specialist" in the United Kingdom and Europe).

The transition from non-clinical to clinical medical student typically occurs in the third year of undergraduate medical training in most traditional medical schools in North America. Medical students are often referred to as "clinical clerks" and complete core rotations in the various medical disciplines (i.e.: Pediatrics, Family Medicine, General Surgery, Obstetrics and Gynecology, Emergency Medicine, and Internal Medicine) as well as clinical elective rotations. Core rotations are typically four to six weeks in length and electives are typically two to four weeks in length. The medical school predetermines learning objectives for core rotations while objectives for elective rotations are mutually agreed upon between the student and supervising physician.

The transition from medical student to "house officer" or "resident", in the United Kingdom or North America respectively, signals the transition from undergraduate medical education to postgraduate medical education. Residents have completed the required examinations and rotations and have been awarded their degree as a "Medical Doctor". Residents are able to write independent medical orders and prescriptions under an educational license once they fulfill the necessary requirements for their area of practice (20). For example, in Ontario, residents would have to have passed their undergraduate medical school requirements and be selected through a written application and interview process to a postgraduate medical training program at one of the six

Ontario medical schools. Additionally, residents are required to have passed their Licentiate of the Medical Council of Canada (LMCC) part 1 examination through the Medical Council of Canada (21)(20).

The transition from resident to independent practitioner occurs when the resident completes the necessary clinical training requirements and examinations for their specialty of medical practice (20). In Canada, depending on the specialty, residents complete two to seven years in a post-graduate training program. Licensing to successfully enter independent practice requires that all residents complete part 2 of the LMCC examination that is clinical in its focus and is implemented as ten clinical scenario stations better known as "OSCEs" - Objective Standardized Clinical Examinations (20). Residents must then pass further examinations specific to their discipline (20). For example, Family Physicians in Canada, regardless of province of practice, must pass both a written examination as well as the Simulated Office Oral Examination developed, standardized, implemented and graded by the College of Family Physicians of Canada – the professional governing body for the practice of Family Medicine in Canada (21).

2.3 Learner & Preceptor Research on Transitions in Medical Education

2.3.1 Non-Clinical to Clinical Medical Student

Studies exploring the transition from non-clinical to clinical medical student have primarily focused on the learners' perspectives. Learners described various tasks that provoke anxiety such as the need to speak with senior staff while on rounds or ordering bloodwork and often described this transition as abrupt (22), confusing or daunting (23,24). Other research has revealed how learners transitioning from classroom to clinical learning experience difficulties as they seek to understand roles and expectations as well as adjusting to clinical cultures. Consequently, learners have described feeling overwhelmed and frustrated (25). Studies examining what factors either support or challenge transitions have found that gender (24), age of the learner (26), and type of pre-clinical medical curriculum (27) impact this transition.

A qualitative study completed in the United States conducted in-depth interviews with female medical students of various medical backgrounds, ages and race to better understand the experience of how female gender may affect the transition to clinical clerkship (24). Their findings confirmed that participants viewed their gender as affecting their clerkship and described experiences of difficulty when learning their role within the medical team as compared to their male colleagues and also reverted back to gender-stereotyped roles (24). For example, women learners felt there was a greater need to prove their competence when working with patients and for this reason the authors concluded that transitions might be more difficult for women (24). Conversely, in the same study, Babaria and colleagues also found that some female participants described their transition to clerkship to have been positively affected by gender-stereotyped qualities. For example, some participants explained that qualities they possessed such as being "nurturing" or "caring" were perceived as helpful by allied health providers (24).

In addition to gender, age also influenced learner's experiences during their transition to clerkship. Shacklady and colleagues (26) found that older age was a protective or positive influencing factor on this transition as more mature students (median age 22 versus median age of 18 in the study) were less likely to feel daunted, confused or overwhelmed (26).

Research has also explored the impact of pre-clerkship curricular formats on learners' experiences entering clerkship. Problem-based learning (PBL) curricula have been found to decrease anxiety and increase confidence for learners during this transition (27). Some overall positive aspects experienced by learners during the transition from non-clinical to clinical work include increased motivational learning derived from a clinical work environment and the value of learning from a real clinical setting (27).

2.3.2 Medical Student to Resident

2.3.3 Resident Perspective

The literature reveals that the transition from medical student to junior doctor (common nomenclature used to describe a post-graduate year one trainee in the United Kingdom) is experienced with more competing positive and negative emotions. On one hand, junior doctors have revealed the positive learning opportunities of having more responsibilities and tasks and thus developed coping strategies to work professionally with patients (28). On the other hand such increased responsibilities created a sense of uncertainty for junior doctors and often they perceived a lack of support from staff and more senior trainees (29). Similarly in relation to the protective factors described previously, junior doctors who had also trained in a PBL curriculum felt better prepared and were more comfortable when dealing with uncertainty (30–33). Beyond a PBL curriculum, research from the United Kingdom revealed that the experience both in pre-residency as well as residency training of working in a multidisciplinary team helped to better support trainees with the extremely negative stress associated with residency training (34). These researchers also emphasized that more meaningful learning must occur with real patients instead of simulated patients to truly prepare students for the responsibilities and stresses of post-graduate training.

In addition to these extrinsic factors such as the type of undergraduate medical curriculum and experience working with multidisciplinary teams, research has also introduced intrinsic factors that affect this transition. A study by Cave and colleagues (3) revealed that newly qualified doctors aimed to detect whether certain personality traits (agreeableness, contentiousness, neuroticism, extroversion, openness) were associated with self-reported feelings of preparedness in their new role. There was a small, but statistically significant, positive correlation for those who scored highly on agreeableness, extroversion and conscientiousness to feel better prepared and a negative correlation for those who scored highly on the trait of neuroticism (i.e.: feeling less prepared) (3). The authors reported no correlation between the trait of openness and sense of preparedness (3).

2.3.4 Clinical Supervisor Perspective

Research has also revealed how clinical supervisors (also referred to in the literature as clinical consultants) experience concerns about the ability of trainees to transfer knowledge from medical school to post-graduate training (34,35). One study explored the hypothesis that short and frequent rotations, along with overnight on-call commitments, pulled learners away from clinical experience/learning and led to a slower acquisition of necessary skills (35). Moreover, research has revealed that supervisors perceived that junior doctors in the United Kingdom in their general first year of postgraduate training (house officer role in the United Kingdom) had difficulty managing complex patients with multimorbidities and lacked confidence working with this population (29). Additionally, supervisors perceived a lack of competence in performing certain procedural skills and attributed this lack of competence as a consequence, at least in part, of the expanding role of other health care professionals such as nurses, nurse practitioners and physician assistants (29).

Evidently, a perceived lack of preparedness and concerns about the ability of trainees to transfer knowledge from medical school to residency experienced by clinical supervisors are documented in the literature. The hypothesized contributing factors to the lack of perceived preparedness and knowledge transfer highlights potential sources of further research.

2.4 Residency to Independent Practice

The literature on the transition from resident to independent practitioner also reveals significant stress and negative emotions associated with this transition. While the literature examines how new consultant physicians, including General Practitioners, Psychiatrists, Pediatricians and Internists in the United Kingdom and the Netherlands, often feel confident in specific clinical skills required for practice in their field (36,37) but they do not feel prepared in terms of general competencies, teaching, managerial or financing skills (36–39). Westerman and colleagues (40) further explored correlations between burnout and perceived levels of unpreparedness in new Internal Medicine

consultants. They found that unpreparedness in general competencies was correlated with higher burnout and emotional exhaustion scores among new consultants in the Netherlands (40). Higher levels of burnout were also correlated with increased levels of depersonalization during this transition and this finding was more evident in female consultants (40). On a positive note, this research found that social support provided to consultants was correlated with lower emotional exhaustion scales and facilitated progression through the initial transition phase (40).

One study examined how new consultants (across all 27 recognized specialties) in Denmark and the Netherlands adapt to their supervisory role (39). Three important overarching influencing factors were described: 1) personal preparedness (i.e.: how consultants were prepared by their own training), 2) personal characteristics (i.e.: personal coping strategies) and, 3) contextual characteristics (i.e.: how to access support from colleagues, departmental procedures) (39). While these three factors were all essential in order to provide supervision to learners the researchers found that contextual characteristics were of utmost importance (39). The researchers concluded that it was necessary for a new consultant to have a formal orientation for their supervisory task in order to facilitate a smooth transition (39). Although perhaps not entirely transferable, the importance of formal orientations for new physicians is likely significant in the Canadian Family Medicine context.

There is some Canadian research available that explores practice choice of residents entering their first year of independent Family Medicine practice. A theory of planned behaviour study from McMaster University in Hamilton Ontario revealed the important impact of peers in the choice of practice type. Grierson and colleagues (41) found that the subjective norms of peers had the strongest impact on the intentions of participants to practice comprehensive care upon graduation. Although this study only explored intentions, the importance of the peer influence on career choice and potential behaviour was a noteworthy finding.

2.5 Gaps in the Literature on Transition from Final Year Medical Student to First Year Family Medicine Resident

There is a paucity of research that explores the transition from final year medical student to first year FMR. The literature focuses largely on assessment of skills and potential impact of pre-residency training courses but does not focus on the resident experience.

Some research from the United States explored whether a "boot-camp" pre-residency training intensive course for final year medical students who were to enter their Pediatric and Family Medicine residency programs would increase self-perceived levels of preparedness (42). While participants did show some increased self-perceived level of preparedness in certain clinical and communication skills, the study highlighted the small sample size and evaluation deficiencies and limitations of self-report (42).

Canadian primary care researchers Garcia-Rodriguez and colleagues from the University of Alberta in Edmonton completed a survey for incoming FMRs to assess baseline levels of self-reported confidence in certain procedural skills as well as self-reported intent to use skills upon entering independent practice (43). Beyond this self-reported data, this study did not comment on the overall experiences or feelings of FMRs during this transition.

A study by Law and colleagues (44), from Toronto, Canada conducted a constructivist grounded theory approach to explore the impact of residency demands on residents' personal relationships and how changes in those relationships could impact their wellness (44). The sample included 16 Canadian residents from various specialties including four Family Medicine residents in first and second years of Family Medicine residency training (44). Noteworthy findings about the personal experience of residents and the effects of residency training on personal relationships were found in this study. Importantly, the findings suggested that the burdens of residency training (time and scheduling pressures, emotional angst) influenced professional identity development, created role conflict between professional and personal roles and responsibilities, and in turn negatively affected their wellness (44). Law et al. (44) further discussed the concern

of a poor sense of wellbeing that occurs during role conflicts that has been previously described in the literature by Schaufeli et al. (45) as they noted a connection between burnout and role conflict (44). Burnout was further noted to affect patient safety as trainees who felt burnt out responded to patients in more cynical and callous ways and noted a sense of depersonalization (45).

While studies in Europe and North America have provided context and insights into the various transitions in medical education and the study by Law and colleagues (44) highlights some of the personal experiences of residents adapting to the impact of their postgraduate training there remains a gap in understanding the unique experiences and feelings of first year FMRs and clinical preceptors who supervise FMRs during their transition. The two studies explored in this thesis will address these two gaps in the literature.

Chapter 3

3 Methodology Study One and Study Two

3.1 Purpose

The purpose of these two studies was to explore the experiences and feelings surrounding the transition from final year medical student to first year Family Medicine Resident (FMR) from the perspective of:

- Study 1: Family Medicine clinical preceptors
- Study 2: First year FMRs

3.2 Study Design Study One and Study Two

In keeping with the objectives of the two studies, a qualitative descriptive design was used to explore the feelings and experiences of both Family Medicine preceptors who supervise first year FMRs during the transition from final year medical student to first year FMR, and the feelings and experiences of FMRs during this transition. Qualitative descriptive design has been described by Sandelowski (46,47) to allow for the clear description of phenomena. It is important to note that qualitative description requires data analysis and interpretation and it is not merely sufficient to describe data without interpretation (47). Intense immersion in the data was used, in keeping with a qualitative descriptive design, to allow for identification, analysis and rich description of themes (48).

Study One and Study Two were completed consecutively to allow one study to partially inform the interview guide for the second study. This was both a purposeful and practical decision to allow for a dual-perspective on important themes identified while ensuring that concurrent analysis of the two data sets would not, unintentionally, affect one another.

3.3 Sampling and Recruitment

3.3.1 Study One – Clinical Preceptor Participants

Family Medicine preceptors from urban, regional and rural teaching sites affiliated with Western University's Postgraduate Department of Family Medicine were contacted by email by the research team to participate in the interview (Appendix A) along with a letter of information and consent (Appendix B). Three follow-up recruitment emails were sent at 2,4 and 6 weeks after the initial recruitment email. A potential list of participants was generated to ensure breadth of experience in clinical practice as well as variety among the three geographical teaching sites. This was a purposive sampling strategy. The following inclusion criterion were set for participation in the study: 1) be affiliated with the Postgraduate Department of Family Medicine and 2) have had at least one year of experience supervising first year FMRs.

Ethics approval was obtained through the non-medical Health Sciences Research Ethics Board of Western University (file approval number 105652).

3.3.2 Study Two – Family Medicine Resident Participants

All first year FMRs were contacted by email by the research team with an invitation to participate in the interview (Appendix A) along with a letter of information and consent (Appendix B). Three follow-up recruitment emails were sent at 2,4 and 6 weeks after the initial recruitment email. The following inclusion criteria were set for participation in the study: 1) participants must be actively registered in their first year of Family Medicine (FM) residency at the Schulich School of Medicine and Dentistry and, 2) participants must have completed their undergraduate medical degree in Canada.

Ethics approval was obtained through the non-medical Health Sciences Research Ethics Board of Western University (file approval number 105652).

3.4 Data Collection Study One and Study Two

Using a semi-structured interview guide (Appendix C & D), in-depth, one-on-one interviews were conducted by one investigator, BL, between 2014-2016. Interviews were completed either by telephone or in person at the Centre for Studies in Family Medicine in London, Ontario. Phone or in-person interviews were determined by participant preference and convenience. Interviews lasted 25-45 minutes, were audio-taped and transcribed verbatim by an independent transcribing service and by the investigator, BL, when audio quality was unclear by the independent transcriber service. Free form field notes were recorded in journal entry format throughout the interviews to capture body language of the participant (when interviews were conducted in person) as well as thoughts, feelings and questions from the perspective of the interviewer (for in-person and telephone interviews). All data was securely stored in a locked filing cabinet at the Centre for Studies in Family Medicine in London, Ontario. All electronic data was kept under password-protected files on a secured server through Western University.

3.5 Data Analysis Study One and Study Two

The analysis process employed iterative, interpretative analysis techniques where data was analyzed concurrently with data collection. Data collection and analysis occurred concurrently to allow exploration of emerging themes in future interviews. Once the interviews had been transcribed, the investigators read the transcripts first independently and then as a team looking for key words and emerging themes. Field notes were also continually generated throughout the collection and analysis process to allow the investigator to highlight emphasis, body language, and ideas to be reviewed with future participants. The transcripts, audiotapes and field notes were reviewed multiple times in order to become immersed in the data and to look for emerging themes and patterns. This resulted in a final analysis template that allowed researchers to organize the data accordingly and assure that data sufficiency had been achieved. Sufficiency of data and themes was reached by interview seven and eight, in Study One and Two respectively, however two more interviews were conducted per Study to confirm data sufficiency.

Three investigators (BL, JBB, TF) completed immersion and crystallization of the data where relationships were explored, and consensus achieved on findings.

Immersion and crystallization consists of cycles where the analyst "immerses him-or herself into and experiences the text, emerging after concerned reflection with intuitive crystallizations, until reportable interpretations are reached" (pg. 179) (48). The specific requirements of immersion and crystallization include data – both primary knowledge and the researcher's experience creating the study objectives and collecting the data; a personality type that has the ability to contemplate and listen to the data; time and patience; reflexivity – where the researcher is able to reflect back on their role in the study and how it influences data collection and analysis; and a mentor or some past experience with the immersion and crystallization process (48). After being repeatedly immersed in the data, immersion and crystallization encourages both contemplation of data and a process-oriented organization of the data as patterns and connections arise. This has been described as using both right and left-brain processes (48). Furthermore, beyond the process-oriented organization of this analysis, other pioneers in the field of immersion and crystallization, such as Howard Stein, emphasized the spiritual and philosophical components that may also be present in the analysis process (48). Stein has additionally described the importance of use of self to move beyond the apparent messages towards deeper understanding and interpretation of the data as a core component of the immersion and crystallization process (48).

These studies were congruent with the recommended requirements of immersion and crystallization for data analysis as described above. The primary data was audio-taped and transcribed and the collecting researcher (BL) took time to create memos, write field notes, and then reflect after each interview. The researchers all had experience with the immersion and crystallization process and were well suited to truly listen to the data. The studies required significant time in terms of input and occurred over an extended period of several months that allowed insights to organically arise rather than be forced through the analytical process. Reflexivity was undertaken during data collection of both studies and by all three researchers during the analysis process. Moreover, the three researchers

would have monthly or bimonthly meetings throughout the data collection and analysis process to reflect on the interview questions, emerging themes and other general reflections on the data. This was completed in an intentional and transparent process where such questioning further informed data collection and analysis. Lastly, two of the researchers (JBB & TF) have considerable expertise in immersion and crystallization and acted as mentors through this process.

3.6 Credibility and Trustworthiness Study One and Study Two

Credibility and trustworthiness of the data were enhanced by a multitude of means. The researcher (BL) developed and refined a research question and chose a methodology with best congruence to explore the study phenomenon. The research question, data collection tool, data collection and analysis techniques were piloted and presented to a group of peers and seasoned clinician-researchers for feedback. A purposive sampling strategy of participants, with maximum variation sampling, was chosen to ensure that participants possessed the information required for the study and who were willing to reflect on their experiences (49). This produced rich data for analysis.

Furthermore, rigour in data collection was enhanced through in-depth, semi-structured interviews which were audio-taped and transcribed verbatim to ensure accuracy of the data. Three researchers (BL, JBB, TF) read and analyzed the data independently before meeting together for team analysis. Team analysis was concurrent with data collection to allow for exploration of emerging themes with future interview participants. BL tracked coding changes using memos as new categories and themes emerged. They were verified as interviews continued. This flexibility in the data collection and analysis processes allowed the researchers to ensure saturation of themes and rich understanding of the data to ensure credibility of results. Questioning the data for context and accuracy in its relevance to the original research question about transitions, reviewing codes and revisiting previous transcripts was completed when each new transcript was analyzed. Reflexivity was employed through the data collection, interpretation and analysis

processes using field notes, which were made to supplement accuracy of data analysis and discussion. Reflexivity, as described by Borkan (48), requires “the ability to reflect on one’s role and involvement and how it influences the data and the process of analysis” (pg. 284). Being together as a team to analyze the data allowed researchers the opportunity to share their thoughts, personal and professional perspectives as well as worldviews that enriched the analysis process.

Chapter 4

4 Study One Findings and Discussion

4.1 Final Sample and Demographics

The final sample included ten Family Medicine preceptors. There was a maximum variation in the total number years teaching, gender, and practice location (urban, regional, rural). There were three participants with five or less years experience supervising first year FMRs, four participants with 6-15 years experience supervising first year FMRs, and three participants with greater than 15 years experience supervising FMRs. Seven participants described their primary clinical location as urban and three as regional or rural. There was an equal gender split among participants.

4.2 Findings from Data Analysis

4.2.1 Overview of Findings

Participants were eager to discuss their feelings and experiences supervising first year FMRs during the transition period. The main findings were grouped into 3 distinct themes. The first theme discovered in the analysis was ‘preceptor experiences with transition’ and included three subthemes: 1) the learner-preceptor relationship (LPR), 2) the importance of colleagues and peer mentorship and, 3) preceptors’ own experiences with transitions. The last two findings were: preceptor feelings during transition and the evolving learner. Together, these three themes provide the composite background of the feelings and experiences of family medicine preceptors who supervise FMRs during the transition from final year medical student to first year resident.

4.2.2 Preceptor Experiences

4.2.3 Preceptor Experiences: the Learner-Preceptor Relationship

The learner-preceptor relationship (LPR) was identified as a dominant theme when understanding the overall experience of preceptors who supervise first year FMRs during

their transition period. This relationship was complex, dynamic and unique to each resident and preceptor dyad. Identified subthemes characterizing the core of this relationship included: understanding the resident as a whole person, altering preceptor expectations of residents, developing clinical knowledge and balancing constructive feedback with a nurturing stance to help the resident to develop confidence and competence.

Participants described the importance of understanding the resident both from the perspective of understanding their educational needs as well as understanding the residents' own personal journey as a person. Participants highlighted how understanding the resident promoted a strengthening of the LPR, which was particularly important during the transition period in overcoming the initial uncertainty and building trust on the part of the preceptor. One seasoned participant explored the following evolution of his supervising methods and how this impacted the LPR:

> Over the years, I think basically working with [residents] you get a better understanding of them, and it becomes less instructive, more make them solve a problem. So sort of encourage them to solve the problem...and encourage them to be more independent…and then recognizing them more as individuals and being a bit more free with how much I would expect from them depending on their personalities and their knowledge.

Another participant highlighted the early uncertainty of both the personal and professional aspects of the LPR: *"It's definitely more of a challenge. I think there's…sort of fear on both parts; so fear for the residents in that they don't know who we are. We don't know who they are*." The same participant explored the evolution of the LPR through understanding the resident as a person: *"You know it's not all about service. We need to really consider the whole person, the whole resident as they are sort of moving into this new job which is huge."* Another participant echoed similar feelings and experiences:

> I realized that just as you evolve in clinical practice with your patients and you feel more comfortable over time…getting to know who they [residents] are as people and understanding what's important in their lives, I realized that that also is parallel with the learners. And that being a little less rigid in my approach to the academic tools, and a little bit more real personhood with that learner actually goes a lot further.

Participants highlighted a variety of intrinsic characteristics and extrinsic factors that can further affect the LPR and should be considered to better understand the resident as a person. These learner characteristics and other extrinsic influencers include, but are not limited to, past professional experiences, past personal experiences, skill sets, strengths, weaknesses, personality traits, insight in one's struggles and strengths as a learner, as well as geographical, institutional, and curricular considerations such as when and what rotation a learner begins their transition into residency.

Many participants also described the need to alter their expectations of residents and becoming more flexible in their supervision style. The majority of these participants also noted the variability of the skill set of each resident and how this can also affect the LPR as well as the preceptors' "coaching" techniques.

> Everyone experiences the transition to residency in a different way and it's certainly not the same for everyone. So I have to keep that in mind and tailor my mentoring and coaching style to the individual residents' needs in those kind of situations is important.

This participant also further explored the idea of flexibility and 'checking-in' with the resident early in their transition period: *"For most residents you have a general expectation of how they will progress but I don't think that every resident fits that mold…I need to check in with residents to m.ake sure they aren't too overwhelmed before progressing with them."*

Participants articulated the importance of balancing feedback to residents while nurturing their skills as part of the LPR. The importance of feedback and nurturing were identified

as vital in helping residents increase their competence and confidence in addition to highlighting discrepancies in confidence and competence and to help change behaviour. These ideas are explored in the following quote:

> I've started to point it out and make it explicit to learners to say, 'Listen, you did this right so if you see this again this what you're doing and you're doing it right.' I'm getting them to reflect on why they were asking me those questions… [giving] deliberate feedback, positive feedback to residents who had low confidence but had competence…making it explicit.

Another participant highlighted the idea of directly observing residents and providing judgment-free feedback during the transition time. Participants also highlighted the difficulty of supporting learners and the inability to provide feedback when they start on off-service rotations.

> Talking with residents, saying, 'Are you comfortable now moving to half an hour appointments? Then giving a lot more directed feedback during that first month is critical…and trying to do it in a sort of non-judgmental way… A lot of residents are scared to let you know what their weaknesses are. So it's creating that safe environment where they're comfortable in letting you in to know what that is so you can help them and work through it.

An interesting finding described combining both feedback from the preceptor and enhancing the resident's insight in order to effectively help the resident. This process also impacted the LPR. The following excerpt illustrates this finding: *"The ability of the resident to provide feedback and the level of their insight into their performance and willingness to be open about discussing their performance are really critical in affecting how I may end up approaching transition issues."*

The theme of confidence and competence, as already briefly described, was also explored in the context of allowing residents the opportunity to grow and develop over time. Participants noted the evolution of residents' comfort with making independent decisions throughout their residency. Some participants reflected on specific memorable residents

who lacked confidence but were very competent in their knowledge and skills when assessed; however, when allowing time for growth they were able to progress to clinical independence with both confidence and competence.

> They were very hesitant to start off where they wanted to talk to me about each and every patient they saw and really to make sure that they were doing the right thing…They actually performed well and clinically there weren't any problems that were identified. When they came back as second year residents I was just amazed at how much confidence, ownership and efficiency was present in their work. That's how I developed this theory that these were the people who were competent, but they didn't know that they were competent.

The LPR was an important finding discovered through this study. The complex and unique LPR was further influenced by the relationship that preceptors had with their colleagues.

4.2.4 Preceptor Experiences: The Importance of Collegial Relationships and Mentorship

Participants explored various professional supports that influenced their experience supervising first year FMRs during their transition. The main support highlighted by all participants was their close clinical colleagues (i.e.: other Family Medicine preceptors and allied health colleagues such as nurses and social workers who work in the same clinical practice location). Additionally, participants noted the influence of formal mentorship within their larger academic Department of Family Medicine, and some noted the role of formal training.

Participants identified relationships with clinic colleagues as an invaluable source of informal support that provided them with peer mentorship when supervising residents during transition. Peer and seasoned colleagues alike provided mentorship to participants. One participant described the special relationship with his clinic colleagues who shared supportive experiences supervising residents during transition as illustrated in the following quote:

> We've been able to grow our practices together; grow our teaching together; grow our experiences of managing brand new R1s together… we'll have a lot of informal discussions around how things are going, or how we might want to do things differently or better, or how to help out Resident X versus Resident Y in a different way.

Other participants also noted the important role that clinic colleagues play in influencing their experiences supervising residents during transition. The sense of community that preceptors have with their clinic colleagues was highlighted as a source of support: *"It [regular meetings with colleagues] serves as a forum to brain storm and clarify ideas about…teaching…that little community is really important to me as it influences how I do things."*

Findings related to the influence of more formal mentorship were variable among participants. While some noted that formal mentors and specialized training which had positively shaped their experiences supervising residents during transitions, more often the majority highlighted the lack of professional development and training opportunities. One participant did share the very important role that previous training had on her experience supervising FMRs during transition and even articulated how this training then translated into peer mentorship and peer support.

> Early on [in my clinical teaching experience] I did my Master's of Clinical Science and one of the first courses is 'Teaching and Learning'. So there was sort of more formal teaching skills and a number of those people through those courses became mentors through the program.

While the minority of participants had formalized mentorship or teacher training, the majority of participants explored the important impact on one's prior experiences with transition.

4.2.5 Preceptors Experiences: The Value of One's Own Experiences With Transition

Participants identified their own personal experiences with transition, both within and outside of medicine, as influential when supervising residents during the transition period from final year medical student to first year resident.

The majority of participants acknowledged the significance of previous experiences with transition in their own medical education and stated they would often try to emulate prior mentors as highlighted in the following quote: *"He [my core Family Medicine preceptor] made it such a positive experience that I think I try to emulate and do the same with my own learners to make it as smooth and as positive of a transition as possible."*

Another participant highlighted a peer physician as a key mentor:

> My brother is a Family Physician as well that I worked with. And he has influenced me because I know the way he precepts. The students and residents really like being with him because of his teaching style. I've lightened up a bit and try to make a real fun environment for them because when you're having a lot of fun they tend to give you the best effort and feel more comfortable and he's the King of that type of approach!

Some participants explored the importance of personal experiences with transition outside of medicine such as having a prior professional career or the experience of immigration. These participants noted that such significant life events influenced their approach to supervising residents throughout the transition period. These, albeit very different but significant, life transitions helped the two participants to develop empathy for the residents they supervised in their transition period. One participant shared the experience of transitioning into medical school after working in a professional setting for three years:

> It took a little while for me to get into a comfort zone…getting back into having to study on a regular schedule and juggle [commitments]. You know that was an experience that I had been through once before when I got back into an academic setting. So for me, personally, that was something that it didn't make it necessarily easier but … I think that's something that probably influenced a lot of what we've talked about already [having empathy for residents throughout their transition].

The experience of immigration further illuminated how different life events had contributed to the preceptors' awareness of transitional issues or challenges.

> I'm a first generation immigrant and an international medical graduate as well. So having been through the system and having learned the culture of academia which is very different from my origin of where I graduated. I think it makes me more aware of those challenges that are faced by young

> people. It makes you more aware of what's out there and how they respond to stresses.

Conversely, some participants with limited experiences with geographical transitions within medicine articulated how it may also negatively impact or limit their understanding of residents' concerns through their transition.

> To some extent my own experience kind of limits my ability because I didn't have to transition to another location which I think adds a lot of complexity to the transition. I have to remind myself that most of my learners are coming here for the first time so it's more challenging than what I went through.

The experiences of preceptors supervising residents during their transition period are influenced by prior professional and personal experiences with transitions. These experiences along with understanding the LPR and the influence of collegial relationships and mentorships were highlighted as the three subthemes of the preceptor experience. Further to the experience of preceptors, the feelings of preceptors during transition assists to better understand the larger phenomena of supervising a FMR in their transition from final year medical student to first year FMR.

4.2.6 Preceptors Feelings

The main feeling expressed by all participants about supervising FMRs during the transition period was predominantly a positive feeling. Many participants elaborated on this finding by describing the interaction with FMRs during this transition period as "enjoyable", "fun", "exciting" and "rewarding". These positive feelings are illustrated by the following quote: "*Well the experience has been great, rewarding for myself. It's been educational. It's been entertaining. It's been challenging at times. Fulfilling – oh boy there's so many ways to describe it! Overall enjoyable – let's put it that way*". Another participant highlighted similar feelings as described in the following excerpt: *"I'd say overall it's been a fairly positive experience. I think it's pretty rewarding to help learners gain that independence early on in their residency training''*. Participants unanimously highlighted these positive feelings as the driving force to continue to teach and to be

involved in postgraduate education. This commitment went above and beyond the transition period as a participant explained:

> I mean it's hard to just say one thing! It's been all over the board. Obviously it's been for the most part a very positive experience since I'm still doing it. There's the feeling of wanting to nurture the future generation of future family physicians. And enjoyment and that I like to be involved in teaching with my clinical practice.

In addition to the consistent positive feelings associated with supervising FMRs in their transition period, the majority of participants also shared a competing feeling of frustration. Participants explored this feeling by providing the context in which they felt particularly frustrated during the transition period. Generally times of frustration could be separated into resident and preceptor contexts.

"Resident-driven" sources of frustration included working with a learner who was 1) having difficulty with their transition; 2) when the learner lacked insight into their area(s) of weakness; or, 3) when the learner was not receptive to feedback. Each context could create feelings of frustration. Participants explored the feeling of frustration in the context of lack of learner insight: *"You sort of see similar themes come up [during the transition period] …and you're just sort of dealing with the same types of situations. The frustration really sets in when the person doesn't understand or doesn't get what's happening"*. The following is an example of the frustration felt when working with residents during their early transition to clinical work:

> What I get most frustrated about in terms of the transition. I guess lately I've been kind of thinking of what I try to instill in a lot of my residents is sort of clinical applicability of guidelines, for example. And then they use that answer without necessary considering whether this is the right context to apply it in. And so that gets me a little bit frustrated when… they can't seem to get out of the academic mode, and get into, the clinical world, where these kind of things can change because you're not treating 60-year olds all the time…you shouldn't be treating a 90-year old and that the person's blood pressure doesn't have to be as tightly-controlled as you were taught in at medical school.

"Preceptor-driven" feelings of frustration occurred when 1) preceptors felt pressure from time constraints, 2) when they were trying to balance patient safety and resident

education in the clinical setting; or, 3) when balancing their own personal and professional life commitments.

The following quote exemplifies all three sources of frustration:

> Sometimes there's the frustration when you don't feel the transition isn't going optimally and that can be frustrating. I guess there could also be other stress mixed in there. Family medicine in general is stressful in a variety of ways so just the time crunch and depending on the learner and the clinic sort of trying to balance all of that so that there's a good learning experience while balancing patient care needs so that's stressful.

Clearly participants identified both resident and preceptor sources of frustration associated with supervising FMRs during their transition from final year medical student to first year FMR; however, all participants stressed that overall it was a very positive and enjoyable experience.

4.3 The Evolving Learner

The last main theme explores the idea of how the needs of residents have evolved over the past two decades and that the broader medical institutional system has fallen behind in meeting those needs. Understanding learners' need for work-life balance, adapting to technology, assessing and managing learners in difficulty during transition periods, and institutional gaps were highlighted as key subthemes to better understand and support the evolving resident in transition.

4.3.1 The Evolving Learner: Work-Life Balance

Participants identified a generational shift in residents and newer areas of concern identified by their own residents around managing stress and achieving work-life balance. Participants noted that demands on residents seem to have increased as many more residents have families and children which undoubtedly necessitates careful work-life

balance and stress management skills during residency. The following quote highlights some of these generational differences affecting the evolving learner:

> I also see at the medical school there seems to be a lot more people in medical school and residency who are married and have kids and their family lives are more prominent. Back in the early 2000s I think of the group of 12 residents that I had in my clinic, there was maybe 1 or 2 who just got married, and maybe someone with kids…I have no idea what the stats are like, but my own anecdotal experience … as a clerkship director [is that] people are having lots of kids during medical school which changes the work-life balance.

Another participant explored the increased time constraints faced by residents by managing competing personal and professional demands and highlights how these increased demands might isolate learners.

> I have had a few residents where they've moved and they work professionally in our geographical setting but on the weekends will go back where they're from and spend the weekends with their families…Overtime that could be the taxing on them. It can be isolating.

Beyond work-life balance, some, more seasoned participants (those with greater than 5 years experience), noted the evolution of learners' concerns about how to cope with stress in residency. Certain participants highlighted that preceptors need to be aware of the evolving needs of learners and how larger societal changes have impacted their learning.

> Watching the interaction between the millennial generation and how we were taught was pretty interesting…just their awareness of technology, their responses to stress and what their coping mechanisms are and how society kind of affects every generation in a different way…I'll give you an example. One of my second year medical clerks came in and the first question I asked him, "What are your objectives for this [rotation]?" The first thing that he asked was "I wanted to see how much stress family medicine residents are under." I found that was interesting because I mean stress and coping with stress, it looms really large in the millennial generation…So being aware of all of these dynamics in society and how our younger generation is morphing, I think also helps in understanding where they're coming from and how they react to feedback and how they learn.

Beyond generational differences in life cycle of residents and concerns about stress management and work life balance, participants also highlighted the impact of technology in the newer generations of learners during the transition period which will be further explored.

4.3.2 The Evolving Learner: Adapting to Technology

The use of technology impacted participants differently based on their total number of years in practice. Participants with less than five years of practice did not report that technology largely affected their experience with residents during their transition. On the other hand, the experience of helping residents how to use technology effectively and efficiently without losing focus on patient-centeredness was shared as an important finding for participants with greater than five years of practice. The following quote explores some of these technological changes in the newer cohorts of learners.

> Compared to 2004 which is when I really started full-time in academia – I'd say the tech stuff – just the comfort with all the point of care references and everything being on their phones and things like that have grown. And that's something that's kind of grown in the world in general. Ten years ago I felt kind of in the same place as my learners and now they're teaching me stuff because they're way beyond me.

Similar to the above sentiment, another participant described technology as a "mixed blessing" that requires the preceptor to help navigate how it can be used effectively in clinic without having the resident become overwhelmed or having them lose focus on the patient:

> I think it gives them more confidence since they can look up the answer. They are connected to much more CME and I think it does help them sometimes at the point of being overwhelming since there's so much information. So the information is there but they still need some guidance – what's the best website? What's the best resource? How to learn, how not to waste their time and how not to rely too much on technology and forget about the basics of Family Medicine; listening to patients, not looking at the computer screen or a monitor especially when you're talking to patients. Just shut up and listen to people. So, it's a mixed blessing – it can really help the residents but it can also take away from

> the very personal aspects of Family Medicine if they're connected at the wrong time.

The role of technology has evidently impacted the transition experience for supervisors with greater than five years of independent practice experience. The need to help residents use technological tools and mediums effectively without jeopardizing patient-centeredness was a key theme of this finding.

4.3.3 The Evolving Learner: Assessing and Managing the Learner in Transition in Difficulty

Assessing the learner in difficulty during transition was shared as a concern for many participants in the study. Participants described the time-specific concern in being able to assess a resident during a transition as a challenge in addition to the very few supports available to preceptors to manage a learner in difficulty during transition or at any point in their residency (although the latter finding is not the objective of this study). These concerns are articulated in the following quote:

> Then when you get more into the learners, I don't want to say learners in difficulty, but maybe those who are just struggling a bit more with the transition and that that transition isn't going as optimally. I know that at the other institution I worked at there was an academic support team that included members of the department and definitely senior family physicians who were very experienced to help, not as much to help the particular resident – there were other means to support the resident – but to help the preceptor, or faculty member, um learn how to better help the resident if that makes sense. So I did find that very helpful, but I don't think we have the same sort of resource here. I think that's sort of part of the problem that it's slow to help for the learner in difficulty when you have to go beyond your clinic.

Participants also conveyed concern about their inability to effectively assess learners given the limited time they have with learners as well as the increased stress imparted on them when they assessed the learner in difficulty. This idea is explored in the following quote.

> So the worry in that is when people aren't doing so well it takes up a lot of time and that adds to some of the stress. How do you help the learner

> without it taking up so much time of your professional life? Maybe there's a tendency just to let things cruise along and I think maybe that's why sometimes things just come to a crisis.

These examples highlight the need for more departmental organization support required by preceptors to help them support residents experiencing difficulty in their transition. Institutional gaps will be further examined in the study's final finding below.

4.3.4 The Evolving Learner: Institutional Gaps in Medical Education and Transition

Participants expressed their concern with systemic gaps that hinder the ability for the resident to succeed in their transition from final year medical student to first year resident. These gaps were present at the departmental as well as institutional levels.

At a departmental-level, when asked, few participants revealed that they had participated in any type of training specific to the resident in transition. Moreover, participants did not feel well trained to help support residents struggling in their transition as described in the following quote:

> And I mean for the majority of residents who transition well it's easy for us but for other residents it can be a bit more challenging as a preceptor and I personally haven't had any training on how to handle that so I kind of figure it out on the fly. But having some more formal training in that would probably be beneficial.

Beyond the department level, some participants highlighted that the postgraduate medical education system is not well designed to support residents as there is a focus on service instead of the learning needs of residents. The following quote summarizes this idea which was stressed by participants:

> The system doesn't manage the transitions or support residents well in transitions. And for many legitimate reasons, right, like patient care has to go on. You know, the difference between June 30th and July 1st from a patient care perspective is irrelevant in a sense that you have to provide the same amount and types of services on June 30th as you do on July 1st even though you have an entirely new crop of residents who have specific transitional needs. But I think our system has never really responded to the needs of the trainees in a transition period.

These broader institutional gaps or perspectives on how to approach the transition period from final year medical student to first year resident should be highlighted and will be further explored and expanded in the discussion section.

4.4 Discussion

This study provides an enhanced understanding of the experiences of preceptors who supervise residents during their transition from final year medical student to first year FMR. These experiences can be organized into three main findings: preceptor experiences during transition, preceptor feelings during transition and understanding the evolving learner during transition. Preceptor experiences during transition are divided into three main subthemes: 1) the learner-preceptor relationship; 2) the importance of collegial relationships and mentorship and; 3) preceptors' own experiences of transition. Preceptor feelings during transition overwhelmingly highlight predominantly positive feelings with competing feelings of frustration during the transition period. Lastly, understanding the evolving learner is divided into four subthemes: 1) work-life balance; 2) adapting to technology; 3) assessing and managing the learner in difficulty during transition and; 4) institutional gaps in medical education and transition.

There are many unique findings to this study that may help inform and fill significant gaps in postgraduate transition logistics, training and support for Family Medicine preceptors who supervise FMRs during transition. Across and throughout the study and intertwined within the three main findings and various subthemes, participants highlighted the overarching importance of a learner-centered approach (LCA) to transition and its inextricable link to the LPR. Beyond the LPR, shifting to a LCA requires a larger institutional paradigm shift in the approach to the postgraduate learner in transition.

In understanding and moving towards a LCA, participants described the importance of being cognizant of and appreciating unique learner characteristics and other influencing factors. As aforementioned, these include, but are not limited to, past professional

experiences, past personal experiences, skill sets, personality traits, insight into one's struggles and strengths as a learner, as well as geographical, institutional, and curricular considerations. All of these characteristics affect the LPR, and consequently the LCA, and require exploration and understanding from the perspectives of both the learner and the preceptor. Participants further described the importance of a no "one size fits all" approach to transition as the needs of the learner are dynamic throughout the transition period.

Participants also stressed that a LCA to transition requires support for supervisors themselves. The main negative feeling of stress felt by preceptors during transition was described as a result of time constraints and personal sacrifices to help support residents during the transition period. This was especially true when a resident lacked insight and was unable to appreciate and incorporate feedback from preceptors. Participants explored how these personal-professional tensions between work and personal life and the tensions felt within the LPR created stress. Additionally, this high level of stress could potentially damage the LPR and negatively affect learning, plus add a significant time burden for primary supervisors. While participants highlighted the absolutely crucial role that their peers and colleagues play as informal supports and mentors, the majority of participants highlighted the lack of training received to help support residents in transition. This finding reinforces the crucial importance of contextual factors, described by Westerman and colleagues (40), such as access to support from colleagues and clear departmental procedures to help facilitate a smooth transition for preceptors in their supervisory/teaching role. Participants explored two key ideas that might help mitigate such tensions and help them better support FMRs during this transition period. Examples of support included both formal preceptor training and the creation of formal academic support committees. Formal preceptor training is a Canadian Accreditation standard of the College of Family Physicians of Canada (50). The Specific Standard for Family Medicine Residency Programs, also known as "The Red Book", states that "Faculty should be knowledgeable about the principles and theories of teaching and learning, and other appropriate educational theory and techniques. This must be ensured through an effective program of faculty development." (50). Moreover, The Red Book recommends that faculty development should be faculty centered and be based on the needs of

individual full and part-time teachers. Arguably, the need for faculty development around supporting residents in transition is a highlighted gap. Academic support committees could be comprised of senior faculty and academic support coaches for residents in difficulty during and, although not the focus of this study, beyond the transition period. The University of Ottawa's Family Medicine Academic Support Process (ASP) is an example of a robust program which helps with the identification of learners in difficulty (51). The ASP identifies areas of concern (i.e.: medical expert, communicator, collaborator, health advocate, manager, professional, person) and helps to create an individualized support program with specific objectives, tracking of learning techniques and access of up to date resource materials in medical education (51). Such committees would arguably help to provide more objective, third party support and assessment of the resident in difficulty in order to help both the resident in transition and the already time-burdened preceptor.

Ringsted's definition of a transition in medical education is a "dynamic movement across different expectations, tasks and responsibilities" (pg. 12) (1). Similar to the ideas originally explored by Holmboe et al. (4), and Ringsted (1), this study reveals that a new paradigm in the approach to FMRs in transition is emerging, focusing on a LCA, and requires action by researchers and curriculum developers to improve transitions for preceptors supervising FMRs during transition. Ringsted, drawing on the work of Mann (52), believes that the paradigm shift in medical education must move away from the predominant behaviourist learning model towards a constructivist model that draws on humanist and social learning theories (1). This paradigm shift, as explored by Ringsted and Mann (1,52), requires accentuated focus on learner-centered strategies, self-actualization and professional transformation.

Better understanding of the evolving learner requires a larger shift in the culture of medical education and the culture around transitions in medical education. Although this study only explores the experiences of FMR supervisors at Western University, it could be reasonably argued that similar themes and concerns are transferable to postgraduate Family Medicine training programs across Canada and other countries who continue to employ traditional rotation and service-based curricula within the behaviourist learning

paradigm. As highlighted by the findings in this study, the demographics of the FMR have evolved and continue to evolve. Participants noted the increased number of learners who are trying to balance personal and professional responsibilities such as child rearing or avoiding burnout and the changing patient-learner relationship where the introduction of technology into the patient encounter is certainly the norm (53,54). FMRs, and all learners, must now navigate postgraduate medical training saturated with medical technologies such as electronic-medical records, personal smart-phone application technologies and online access to clinical guidelines (53–55). Whether the evolution in learner demographics, technologies and increasingly accessible online clinical guidelines are positive or negative changes, participants believe that they remain potential sources of stress during the medical transition period that can marginalize the relationship between patients and learners.

Agreement can be found in the literature in the work of Holmboe et al. (4) who completed a descriptive literature review of both undergraduate and postgraduate transitions in medical education in Canada, the United States, Europe and South Africa. They found that the current prevailing socialization process in medical education detracts from learners' involvement in healthcare microsystems throughout their training which consequently "limits their inclusion in team-based care and quality improvement" (pg. 76) (4). Curricula developers must also re-examine learner and patient safety needs in transitions as short rotations and frequent transition periods have been show to detract from learning and professional development as well as patient safety (56–58). Similarly, the current findings would support that there remain concerns around patient safety during the transition period while on Family Medicine rotations. Furthermore, hidden agendas on hospital-based rotations that include a focus on service-based care and unprofessional "turfing behaviors" (where residents actively block admission to their service or encourage early or unsafe discharges) are the hidden culture into which residents are socialized (58,59). This socialization hampers learning, fosters the development of unprofessional behaviours and threatens patient safety (56,58,59). Medical education leaders, postgraduate deans and directors must move towards a learner-centered, constructivist approach to learning and transitions to improve learning and address these hidden agendas (58,59).

The shift away from the previous prevailing behaviourist, preceptor-centered and service-focused medical education paradigm surrounding transitions will also require teachers trained with an enhanced skill set to support learners. Teachers and supervisors must receive appropriate training in mentoring and coaching techniques to encourage professional role modeling, coping skills, and the acquisition of skills required for adult-learning, such as frequent feedback seeking behaviours, in addition to traditional teaching and assessment methods (50,60,61). More longitudinal attachment of learners to practice settings is one suggested step to improve resident learning, improve professional development, increase opportunity for feedback and role clarification with mentors and detract from the stress of transitions in medical education that has been well documented in the field. Situated learning and communities of practice, where learner participation is central, and guided supervision, role modeling and coaching, will be paramount to supporting learners.

4.5 Strengths of this Study

Given the scarcity of Canadian research exploring the experiences and feelings of clinical preceptors supervising first year FMRs, this study provides important new information. The Canadian context of this study is important given that Canadian medical schools have a short Family Medicine Residency Program compared to other training locations in the United States, Europe and Australia where the majority of studies about medical transitions are conducted.

The sampling techniques, data collection and methodology chosen for this study also contribute to its strengths. Purposive sampling was chosen to ensure a maximum variation in participant demographics by gender, geographic location and number of years supervising residents. Furthermore, purposive sampling ensured that participants had intimate first-hand experience with the subject being studied. The one-on-one independent interviews with participants allowed gathering of data that was rich and in-depth in its content. The qualitative descriptive method of data analysis allowed for deep immersion in the data to allow for themes to be discovered. Having three researchers

reviewing and analyzing the data independently resulted in triangulation of findings by consensus. The concurrent data collection and data analysis allowed one interview to inform the next to ensure newly discovered themes were further explored to ensure saturation of findings.

4.6 Limitations of this Study

While the Canadian context is on one hand seen as a strength of this study, it could also limit its transferability. Participants worked and lived in South Western Ontario as clinical teachers in one residency program. The findings may therefore not be transferable to other Canadian training sites or other international training sites given the various local and departmental nuances as well as international variability of training programs. Purposive sampling may also have created a selection bias as participants who chose to participate in the study may have had more positive experiences or feelings surrounding this transition.

4.7 Future Research and Knowledge Translation

This study provides new important information about Family Medicine preceptors who supervise first year FMRs during their transition to residency in Western University's post-graduate Family Medicine residency program. While the insights gained from this study are invaluable, further research is required to further explore key findings of this thesis both locally and internationally.

The following is a list of recommendations for future research and knowledge translation:

1. Replication of this study at different training sites across Canada could be conducted to see if the findings of this thesis are transferable throughout the Canadian Postgraduate Family Medicine context.

2. Further replication internationally would again allow researchers to see if these findings are further transferable and likely gain other important insights in respective international contexts.

3. Given that this thesis offers recommendations that may inform curriculum planning, further studies from the perspective of post-graduate Family Medicine department chairs and program directors would be important to learn about administrative experiences around transition and curriculum planning.

4. Dissemination of these findings may influence curriculum redesign, create formal clinical teacher training for preceptors, and the establishment of a formal mentorship program for preceptors. If such changes are implemented, they should be evaluated through further research such as program evaluation methods and further qualitative studies to explore value of any curricular changes.

5. The creation of a formal academic support team to support learners in difficulty and their primary preceptor (s), modeled from the University of Ottawa's Academic Support Process, should be a goal of the Western Postgraduate Department of Family Medicine.

6. The creation of a Western Family Medicine online Community of Practice would create a platform to allow discussion, sharing, and learning amongst students, residents, support staff and Family Medicine faculty to support both clinical preceptors and learners in Family Medicine.

4.8 Conclusion

The findings of this study exploring the experiences and feelings of preceptors who supervise FMRs during their transition from final year medical student to first year resident at Western University is supported by the current literature about transitions in medical education. Most importantly the findings of this study highlight that there must be a paradigm shift in the way transitions in medical education are approached moving

from a traditional behaviourist, preceptor-driven model to a LCA. Medical rotational curriculums should no longer be considered the norm, dating back to the 1910 Flexner report (5), and medical education leaders must re-examine the landscape of transitions in medical education. FMRs are currently working in a system which is transition-heavy, service-driven, restricts learner involvement in social microsystems and team-based care, promotes the socialization of unprofessional behaviours, threatens patient safety, and detracts from patient-learner relationships (1,4).

Given that the Family Medicine postgraduate training program is the shortest training program in the country despite increasing professional and personal demands of the evolving learner, Western University, and all Canadian postgraduate Family Medicine programs should move quickly towards shifting the paradigm and culture surrounding transitions in medical education. This paradigm shift must be learner-centered, increase communities of practice through longitudinal Family Medicine experience, and provide strong professional development and training for preceptors who are integral to the success of learners. Moving towards a learner-centered approach with increased opportunities to work with Family Medicine preceptors and peers may support learners in transition, reduce stress, promote patient safety, build relationships in Family Medicine and encourage quality improvement for health systems.

Chapter 5

5 Study Two Findings and Discussion

5.1 Final Sample and Demographics

The final sample included 9 first year FMRs. There were four males and five females ranging in age from 25 to 27. Four participants completed their undergraduate medical degree training at Western University and five completed their training at other Canadian medical schools.

5.1 Findings Overview

The findings discovered during the data analysis can be explored through five major themes. First, the findings revealed that Family Medicine residents (FMRs) viewed their transition from final year medical student to first year FMR as a complex but predominantly positive experience. Second, FMRs described having evolving, but often competing, positive and negative feelings during this transition. Third, FMRs articulated an important professional transition that occurs as a first year FMR. Fourth, FMRs noted personal, intrinsic factors as well as a multitude of extrinsic factors that influenced this transition. Lastly, participants expressed experiences and feelings about their lack of connection to the Family Medicine postgraduate program and the Postgraduate Program at large, as well as, providing suggestions to improve this transition for future FMRs.

5.1.1 The Positive and Complex Experience of Transition from Final Year Medical Student to First Year FMR

Participants overwhelmingly described their experience during the transition from final year medical student to first year FMR as a positive experience. While many participants articulated how the increased responsibility and steep learning curve characteristic of the transition to residency was somewhat daunting, the dominant description was positive.

Many participants viewed this transition as particularly positive and rewarding because they gained confidence through experience and gradated responsibility for patient care and patient safety. The following quote eloquently described the complexities of this experience:

> I think my main experience has been very positive in the transition from final year medical student to resident, it was a big change in a lot of ways. [The transition] has been both a challenging and daunting experience but also hugely fulfilling and necessary in transitioning to becoming an independent practitioner after the two years of residency.

Rotational schedule and the influence of near-peers, a medical trainee who is at least one year their senior on the same level of medical training (i.e. senior medical students teaching junior medical students or senior residents teaching junior residents) (62), were particularly important to FMRs during the early transition experience. Participants repeatedly acknowledged how the initial on-service rotation could be a source of stress impacting their level of connectedness to others in the Family Medicine program. The following quote illustrates these factors.

> I did start on General Surgery so it probably wasn't the best rotation to transition into residency. I mean it's a very busy service so, in hindsight, it probably would have been nice to have a little bit of an orientation and meet some other Family residents instead of just starting and doing a lot computer work I hadn't done before. But at the same time I found a lot of the senior residents or even residents who trained here were really helpful and supportive so overall I had a really good and positive experience.

The early experience of transition experienced by participants could generate anxiety and uncertainty. This could intensify the discomfort they experienced in navigating their role in the transition period:

> There was a lot of anxiety in terms of 'Is this the right medication? Is this my scope of practice?' 'Should I be doing this? Should I ask for help?' So it was kind of hard to navigate my role at that point. There was a certain amount of discomfort in being able to trust my own abilities.

Near-peer support was a very important factor in creating a positive experience during this transition and served as a source of support. Participants described the shared understanding of this experience as being supportive regardless of program location or

even when speaking with a near-peer who had gone through this transition at another point in time. The following exemplifies the ease of talking to near-peers about this complex experience and the importance of a shared understanding:

> Some of my peers - being able to talk about what you're going through and the experiences that you're sharing is helpful and contrasting it to other programs too I think is helpful. My significant other is also a resident so that I think has been really positive because you can talk about things and they kind of understand. If you're upset about something or really excited about doing something you don't have to explain to them what the procedure was, they know what you mean.

The value of the near-peer shared experience could also facilitate their adjustment to residency and validate their lived experience.

> Definitely with my peers – other residents – we talk about the shared experience of adjusting to residency so that's more comparing my experience with their experience so that's kind of helpful to say 'OK, I'm not the only one to experience these kinds of feelings or experiences.'

Regardless of the complex nature of the transition from final year medical student to first year FMR, the participants clearly articulated their experiences as very positive with the near-peer relationship being crucial to the positive experience. Conversely, participants noted in hindsight that the initial service rotation could threaten the positive experience of this transition. This understanding of the complexity of the transition is described in even greater depth when participants explored the feelings they experienced during this transitory period in their medical education.

5.1.2 Evolving and Competing Feelings During the Transition from Final Year Medical Student to First Year FMR

The second overarching theme explored the feelings experienced by participants during the transition from final year medical student to first year FMR. This differed from actual experiences to specific emotions and how they evolved over time. The participants described a variety of emotions that could be grouped into positive and negative categories (see Table 1). These feelings were often in competition throughout the transition. Participants also noted an evolution of these feelings throughout their first year of residency and even between on-service rotational transitions.

Table 1: Feelings described by participants about the transition

Negative	Positive
Scared (of looking incompetent)	Exciting
Anxious	Proud
Daunting	Enjoyable
Fear/terrified (of negatively impacting patient outcome)	Rewarding
Doubt	Sense of ownership
Judged	Challenging
Intimidated (by having to teach medical students)	Autonomous
Bothered (by not knowing other residents in the Family Medicine program)	Interesting
Concerned (about finding work-life balance)	Fun
Isolated	Supported (by near-peers, friends, family)
Lonely	Connected (via technology)
Overwhelmed	Prepared
Pigeon-holed (as the FMR)	Increasingly confident (as time passed)
Misunderstood (by family)	Valued as a team member
	Comfortable

Writing the first prescription as a resident was highlighted as a particularly emotional act that illustrated the competing and evolving nature of the participants' feelings.

> When I wrote my first prescription I freaked out for a good 20 minutes and it was a simple Meloxicam order and it was just like 'Oh man, what about the NSAID risk, or the COX-1 risk, or whatever.' So it was challenging to know that the safeguards were removed a little bit and I had to rely on myself more than on others. [But] it's a sense of ownership taking care of my patients and there's a greater responsibility towards my patients now and that's rewarding.

Participants further explored the fluid evolution of feelings that occurred during the transition as they completed more rotations and were able to compare some of their struggles with their peers:

> I think my confidence grew really after Cardiology. Seeing other people struggling with the same thing and after a couple of months of not screwing up anything terribly bad then I was like 'OK, yeah I can do this. I have the skills and confidence to do this. I am competent to do this.' I don't think there was a crystallizing patient encounter that made me realize that. I just think at some point I noticed that I was less nervous about things that made me very nervous at the very beginning. I think it was just a gradual transition…So it was a matter of making sure I was extra careful for a while and, I'm still very careful, but the fear kind of just went away I guess.

Participants also described the competing feelings of nervousness and excitement and emphasized some of the thought process and introspection with regards to their learning which transpired throughout the transition period:

> I guess [I felt] some kind of nervousness and whether I'm making the right decision or not. And so that nervousness did exist, but on the positive side too, there's also the excitement of okay I need to learn from this. I need to make decisions moving forward and that experience will come with time.

Participants varied in the speed in which their emotions evolved, and some participants described the ongoing anxiety associated with the increased decision-making responsibility that comes with being a resident. Despite gaining confidence over time the following participant highlighted the ongoing feeling of anxiety:

> I think it [anxiety] is persisting throughout my residency; I'm afraid of making bad decisions to negatively impact the patient. Also there's always this underlying fear that I'm making bad decisions and I'm going to look bad to my supervisor. I've gained some confidence and I've progressed as a resident but I would say it's still there.

Participants also noted the continued presence of self-doubt that occurs during this transition, as well as the role of professional supports that assist residents in navigating this transition:

> I encounter a problem and I ask myself 'Is this too big for an R1? Should I be asking my senior or my supervisor?'. I guess that clouds my mind almost everyday when I'm on service but I do have a safety net with seniors and staff and they're pretty clear what they expect from me and happy to help me.

The feelings experienced by participants during the transition from final year medical student to first year FMR stressed the competing, evolving and complex nature of this transition. The transition to professional is the third finding of the study that further highlights the feelings and multiple, interconnected, layers of this transition and deepens the understanding of this transition.

5.1.3 The Transition to Professional

Participants experienced a major professional change during their transition to residency. They described an increased sense of duty and responsibility for patient care which was consistently explained as a change that occurred early on and throughout their transition to residency. Participants articulated the evolution of how they approached their medical studies and self-learning with an increased focus on patient management and helping individual patients. This was in comparison to their previous textbook learning which had a goal of performing well on tests and licensing exams. This shift in mindset and in the approach to learning described by many participants is explored below.

> In med school learning to absorb and trying to remember things for the exam as opposed to now where my mindset is when I'm learning and absorbing it's so I can take care of my patient and make them better and

> then make me a better doctor. I think I [was] subconsciously doing it without realizing. The way I'm learning now is for totally different reasons compared to medical school.

Approaches to learning intrinsically evolved to be more patient-focused as a result of an increased sense of duty. The following excerpt builds on this finding and the idea of the professional role as a medical practitioner.

> I'm coming home and reading because I'm about to start someone on their medication or I started someone on a treatment plan and I don't really know the next step. So definitely that's been a huge shift in learning to do well in school versus learning to actually do the job, be a good doctor. I would say that it was totally intrinsically driven, like no one told me to read [that way], no one told me to be that way as a resident. It was just the way that I felt like my role was changing. I had to change the way I was learning and the way I was acquiring knowledge.

Participants further expressed the unique and difficult changes that occur in the very first days of this transition period as within a 24-hour period the expectations of them changed dramatically.

> You're in between the two phases and your scope of responsibility really opens up in a matter of days. Basically you're a fourth year student on June 30th who's just graduated and then July 1st you are expected to be a resident and all that entails and there's no easy transition.

Participants explored the sense of duty to patient care and safety. The transition and enhancement of the professional role encouraged pride and ownership of patient care.

> Sometimes it can be a little bit onerous when you're staying late, but at least you have that responsibility so you can kind of have ownership of it. I think that's also why it makes it easier to stay later or work harder because you have your name on things and feel like you're making more of a difference than as a medical student.

Lastly, participants highlighted the sense of increasing competence through exposure and experience during the transition period. Participants explored the importance of gleaning relevant learning for Family Medicine as a goal of their off-service rotations. Many participants also noted a sense of duty, to be prepared for the responsibility of continuity of patient care, during Family Medicine rotations.

> I would say professional development, making sure that I'm getting prepared for my Family block and being confident in managing my patients. Moving forward into the future, I think that's always in the back of my mind and being on all of my off-service rotations that's always what I'm trying to have as a goal as to what can I take from here and bring it to my Family Medicine block?

The transition to the professional role was clearly articulated as being crucial for FMRs to adopt early on and develop throughout their transition. Intrinsic and extrinsic factors influencing the transition impacted all the experiences, feelings and the transition to the professional role assumed by FMRs during their transition and is the fourth key finding.

5.1.4 Intrinsic and Extrinsic Factors Influencing the Transition from Final Year Medical Student to First Year FMR

Intrinsic and extrinsic factors influencing the transition was the fourth theme uncovered during the data analysis. Participants described personal attributes, or habits, as intrinsic factors influencing their transition. Some participants described how these attributes, albeit stressful at times, also served as a motivator to prepare for the transition challenges. Whereas other participants noted that transitions were challenging for them due to difficult experiences with prior transitions. The excerpts below illustrate these two contrasting personal approaches to transition.

> I think in all the transitions in my life…one of the themes has been me becoming, not very anxious, but a little bit nervous before all of them. Possibly overthinking things, worrying about how I'm going to react in a new environment with new responsibilities. I think it's something very natural for me. It's almost a ritual to prepare for something new.

A contrasting example of a participant that struggled with transition is described below where the extrinsic loss of a close loved one intrinsically influenced future transitions:

> [It] made every transition after that so much more difficult, with any big change - graduating undergrad, starting medical school, finishing medical school, moving to [place], starting residency, every big change tainted by the fact that I didn't have that support person to help me go through that change. I continue to think about that with every transition that I have.

Extrinsic factors revealed by participants were much more diverse and included: geographical moves between cities or provinces from medical school to residency, residency rotation schedule, past experiences with transition, formal transition series, near-peer supports, professional role models, personal supports and technology. The following quote describes the strong influence of elementary school education and a structured learning environment that influenced habits in the transition to residency:

> I think it's been something that was instilled in me. When I was younger, I switched schools to a very strict private school when I was 11. It was the first time that I'd ever had a real educational structure. I think that being in that environment when I was very young and realizing that it actually worked. I became a really good student and achieved well in that really structured environment. It made me realize that, whether consciously or subconsciously, that I needed to apply strict rules and structure to my life.

Changing work-life balance and family dynamics were also key extrinsic factors. Participants explored the importance of finding work-life balance and highlighted the need to find this balance to support their transition.

> I'm logical and organized and recognize what I need to support my transition and I can reach out to family, friends and other friends who are in residency too. I've established a good work-life balance and I can incorporate the balance into busier rotations. Just incorporating wellness into your daily life I think really helps facilitate a smooth transition.

Participants further noted the importance of finding work-life balance in their transition to residency by being very regimented in their follow-through with self-care:

> I divide the amount of time in my head between work and exercising and social time with friends or doing other interests. There are key things that I never skip them but if there are other things that are important like staying later at work I might cut down my work out time but I still keep the minimum I need.

In addition, participants further articulated the tension of finding work-life balance with competing family and professional obligations.

> The concern is always there - you have family obligations. I'm from [place] and living in [place], there's been internal tension within myself trying to decide whether to prioritize if I have some work to do here in [place] versus going to [place] and potentially doing work but the compromise of having family obligations.

Participants described the difficulties in transitioning to a new community and the lack of social supports during this transition.

> You're going from a community that you know to a community where you don't know anyone. So the process has to start from scratch, you have to make new friends. It's great that I have my girlfriend, but there are no parents, there are no grandparents, there are no other family members. So it's sometimes hard.

The various intrinsic and extrinsic factors highlight the heterogeneity of the FMR transition experience and increase the awareness of the resident as a person with unique lived life experiences. Further understanding of these experiences can enhance a resident-centered approach to transition to support residents during this important transition period.

5.1.5 Lack of Connection to Family Medicine

The final theme emerging from the analysis was a consistently articulated feeling of being disconnected from the Family Medicine program. This feeling was described with a noteworthy degree of emotion. The lack of connection was experienced most acutely when participants started off-service (not being on Family Medicine for their initial residency rotation) and did not have the opportunity to meet with their Family Medicine supervisor or other FMRs. The following quote also describes the difference of the Family Medicine resident experience compared to other smaller residency programs:

> I remember when I started kind of feeling a little bit adrift and very off service because we didn't really do anything that was consolidating. I remember the first couple of months feeling very different than my significant other who's in a much smaller program who knew all the staff, knew all the co-residents, knew everyone in the program. But it's harder when Family [Medicine] is such a big program. I have friends who don't

> transition to Family until next block and I think they feel a little bit more lonely.

Others expressed how they never felt there was an ideal opportunity to meet support staff, their supervisors or other FMRs and echoed a lack of connection to the Family Medicine Program. There was a resounding feeling of discomfort and feeling adrift when they did not know or recognize other peers in their program, "It bothers me sometimes not knowing everyone in the room…I think about running into to someone in five years and only then realizing we were in the same program…it seems bizarre." Not recognizing or meeting support staff was also a recurring concern described by participants.

> I guess from the Family Medicine Department I found it kind of odd that you would start on a service and not know any other FMRs and have never had the opportunity to meet the support staff for FM. Maybe they could have done an orientation before we started residency. We did it like 3 to 4 days in and I think I was post-call so not much really sunk in. I know a few of my colleagues felt the same way. [They] didn't really feel that connection to Family Medicine…at least something site-specific.

Participants also noted the lack of support staff or mentors when starting on an off-service rotation and how that added to the difficulty of starting their residency program. Moreover some participants described waiting for months to hear from their supervisor or not hearing from them at all:

> My primary Family Medicine preceptor was identified to me probably about two months before residency and I wasn't sure if I would necessarily hear personally from him before the process started. And I ended up not hearing from him and I wondered if I should contact him. I never ended up contacting him until I started my family rotation which was four months into residency. It certainly could be helpful kind of welcoming to the program, asking any questions or interests that I might have.

The lack of connection to supervisors, support staff and peer FMRs was highlighted by participants in this study and will be further explored in the discussion section when describing ways to better support this transition experience.

5.2 Discussion

This study provides an enhanced understanding of the experiences and feelings of first year FMRs during their transition from final year medical student to first year FM resident. These experiences were organized into five main themes: 1) the positive and complex experience of transition from final year medical student to first year FMR; 2) evolving and competing feelings during the transition from final year medical student to first year FMR; 3) the transition to a professional role; 4) intrinsic and extrinsic factors that affect the transition from final year medical student to first year FMR; and 5) the lack of connection to Family Medicine.

Important findings emerged in this study that may help inform and fill significant gaps in postgraduate transition logistics and promote training and support for FMRs in their transition from final year medical student. Throughout the study and intertwined within the five main findings and various subthemes, participants highlighted the exciting and rewarding aspects of their transition while also feeling very nervous and fearful during this process. Noteworthy was the need to better understand the learner's context while increasing the learner's connection to the Family Medicine program, Family Medicine co-residents and Family Medicine supervisors. These were described as crucial tasks in order to facilitate a transition where learners felt involved, connected and guided in their journey towards becoming a professional, confident and competent FMR, and ultimately an independent practitioner.

Another noteworthy finding in this study is that participants did not describe the development of any behaviours or experiences that could be viewed as unprofessional. This is in contrast to a body of literature that has highlighted that transitions in medical education are associated with the development of unprofessional behaviours such as lying or withholding important patient information from supervising staff (4). Conversely, participants in this study described a great deal of professional awareness and a deep sense of professional duty in preparing and providing care for patients. This included staying late in clinic, reading around cases, and being reflective of how off-service rotations could enhance their future Family Medicine core rotations.

Findings surrounding the experiences and feelings highlighted by FMRs are congruent with the literature surrounding transitions in medical education. Teunissen and Westerman (2) found that transition periods in medical education were associated with personal negative consequences such as demotivation, confusion and stress. This study builds on the literature as the findings provided particular sources of stress and anxiety experienced by FMRs. While both rewarding and exciting experiences and feelings dominated the findings they still often remained overshadowed by the fear of causing harm to patients or looking incompetent in front of supervisors.

The importance of near-peers in helping residents to overcome their fears and, gradually, increase their confidence is a new and important finding of this study in terms of the specific experience for FMRs. While the importance of peers has previously been well described as a critical component in a variety of learning theories (adult learning, small-group learning, social-constructivist) (63), the findings further the understanding of the unique experience of FMRs who have the shortest post-graduate training program in North America. As described by participants, the goal of becoming an independent practitioner is a central goal even as they are still transitioning from final year medical student to first year resident. Being validated by peers early and throughout this experience is necessary to advancing their confidence amongst a rapid succession of residency rotations. Grierson et al. (41) found that subjective norms (including peers) during residency was important in deciding what residents intended to do upon graduation. This is another example of how near-peer support and norms are so important and certainly an area for further study.

The important transition to a professional role was strongly expressed by participants as a core goal of their transition to FMR. While participants often noted a continuous struggle with constant transitions occurring every 4-6 weeks, they also noted that with each rotation they worked to glean certain skills that, when on their future Family Medicine rotation, would benefit them and their patients. The transition to the professional role is a new finding of this study which builds on previous work about the development of

professional behaviours. Holmboe et al. (4) described how frequent transitions actually delay learners' integration in medical socialization and may encourage the development of unprofessional behaviours that could negatively affect patient care. The findings of this study also revealed the aforementioned fear of causing patient harm, and, ironically, despite the body of evidence in the literature (1–4), the majority of residency programs still operate in a transition-heavy, service-focused, and rotation-based post-graduate training system described by Flexner in 1910 (5). In contrast to a service-focused system, implementing a learner-centered approach which focuses not only on mutually agreed-upon learning goals between supervisor and resident to ensure the development of medical competence, the deeper understanding of the resident as a person has been shown to foster professional development and promote patient-centered learning. Cooke et al. (64) have argued the importance of tailoring the learning curriculum to the needs of learners to be dynamic; providing learners with context that meet their developmental learning needs to solve progressively more complex clinical problems. Furthering the argument of Cooke et al., (64), Weston and Brown (65) also emphasized that this type learning environment allows learners to develop positive professional habits as well as "essential competencies for independent practice" (pg. 185) (65) and could help counter the negative effects of the hidden curriculum.

Understanding the learner's context and learner-specific learning needs is also supported by the well-documented learner-centered approach (LCA) in the literature. Despite this approach being highlighted since the early 1900's, many residency programs have yet to truly implement a learner-centered curriculum. The literature reinforces the risk to patient safety (such as lying or withholding relevant patient information from preceptors, or turfing behaviour to avoid necessary admission to hospital under a particular service) (4) and the development of unprofessional behaviours with service-centered rotations (66). Weston and Brown (63,65) have described the importance of understanding the learner as a whole person. This work reinforces the value of teachers to be aware of "the students' background, their life history and personal and cognitive development, and their learning environment" (pg. 199) (63). Our findings reinforced that although overall experiences are homogeneous, the specific needs of learners in the transition period remained diverse

and contextual to unique intrinsic and extrinsic influences such as past experiences with transition, personal attributes and different lived life events. The LCA described by Weston and Brown (63,65) would therefore be well-suited to support learners in transition and to understand these learners as a whole person.

The lack of connection to the Family Medicine program, supervisors and co-residents was a new finding of great importance to this study. Given the aforementioned examples that led to FMRs feeling a lack of connection to their program (i.e. not hearing from a supervisor, starting off-service, missing social events after off-service post call days) importance of shifting towards a learner-centered approach where learner needs dominate the educational experience. More formalized communication protocol to ensure all FMRs are connected with their FM preceptor early in their training regardless of starting rotation would be an important starting point. Furthermore, the importance of developing more opportunities for networking among FMR peers and near-peers should also be explored to help support and guide FMRs early in their transition. The opportunity to ensure early Family Medicine exposure as a core service should also be considered to allow early clinical connection to FMRs core specialty to allow for early tangible connection to their discipline.

5.3 Strengths of this Study

Given the scarcity of Canadian research exploring the transition from final year medical student to first year FMR this study provides new information about this transition. The Canadian context of this study is important given that Canadian medical schools have a short Family Medicine Residency Program compared to other training locations in the United States, Europe and Australia where the majority of studies about medical transitions are conducted.

The sampling techniques, data collection and methodology chosen for this study also contribute to its strengths. Purposive sampling was chosen to ensure a maximum variation in participant demographics by gender, geographic location, urban and rural

Family Medicine training sites and undergraduate medical school. Furthermore, purposive sampling ensured that participants had intimate first-hand experience with the subject being studied. The one-on-one independent interviews with participants allowed gathering of data that was rich and in-depth in its content. The qualitative description method of data analysis allowed for deep immersion in the data to allow for themes to be discovered. Having three researchers reviewing and analyzing the data independently resulted in triangulation of findings by consensus. The concurrent data collection and data analysis allowed one interview to inform the next to ensure newly discovered themes were further explored to ensure saturation of findings.

5.4 Limitations of this Study

While the Canadian context is on one hand seen as a strength of this study it could also limit its transferability. Participants in this study worked and lived in South Western Ontario and were enrolled in one residency program. Although maximum variation was achieved by ensuring representation in all urban training sites (three local training sites within London, Ontario) and some rural training sites (within Western's Family Medicine four distributed training sites), the demographic and geographical representation remains limited. The findings may therefore not be transferable to other Canadian training sites or other international training sites given the various local and departmental nuances as well as international variability of training programs. Purposive sampling may also have created a selection bias as participants who chose to participate in the study may have had more positive experiences or feelings surrounding this transition. Moreover, including only participants who completed their undergraduate medical training in Canada limits the transferability of these findings as the feelings and experiences of international medical graduates (IMGs) could greatly differ from their peers who had prior undergraduate medical socialization in the Canadian healthcare setting.

While confidentiality was built into this thesis, described first in the letter of information (Appendix B) and then later reviewed verbally prior to commencing audio-taping of the interview with participants, FMRs may have still been reluctant to share experiences or behaviours that may reflect unprofessionalism for fear of recrimination during their

training. While this thesis was not able to identify participants who had participated in or described experiences reflecting unprofessional behaviours, the participants openly described many positive and negative emotions surrounding this transition.

5.5 Future Research and Knowledge Translation

This study provides new important information about the transition to first year FMR in Western University's post-graduate Family Medicine residency program. While the insights gained from this study are invaluable, further research is required to further explore key findings of this thesis both locally and internationally.

The following is a list of recommendations for future research and knowledge translation:

1. Replication of this study at different training sites across Canada could be conducted to see if the findings of this thesis are transferable.

2. Including IMG participants would add more robust and representative data in future studies.

3. Further replication internationally would again allow researchers to see if these findings are transferable as well as likely gain other important insights to respective international contexts.

4. Given that this thesis offers recommendations that may inform curriculum planning, further studies from the perspective of post-graduate Family Medicine department chairs and program directors would be important to learn about administrative experiences around transition and curriculum planning.

5. Studies employing mixed methodological methods may also be helpful in assessing patient safety outcomes during times of transitions or competency outcomes of FMRs.

6. Dissemination of these findings may influence curriculum redesign or the creation of formal mentorship programs. If such changes are implemented, they should be evaluated through further research such as program evaluation or further qualitative studies.

7. Mixed methods studies looking at the transition from Family Medicine residency to independent practice would be helpful to understand how to better prepare FMRs for their independent early years in practice.

5.6 Conclusion

While FMRs describe their experiences and feelings in the transition from final year medical student to first year resident as largely positive and exciting, they also face considerable stress associated with fear and anxiety of harming patients. Beyond these experiences and feelings, FMRs note a crucial transition to becoming professional, influencing factors on their transition as well as a lack of feeling connected to the Department of Family Medicine. Our findings have generated recommendations that may help to enhance this transition, acknowledge the learner as a whole person, and deepen their connection to Family Medicine peers and mentors.

FMRs are working to overcome obstacles of post-graduate training systems that still offer a ‘one size fits all’ approach to transitions. Despite the body of literature that emphasizes the importance of learner-centered approach to medical training, this study furthers our understanding of the importance of this approach in addition to developing early connections to the Family Medicine program, one’s primary clinical preceptor and near-peers. These connections support FMRs in achieving their goal of becoming a confident, competent independent practitioner in the shortest post-graduate training program in North America. Shifting to a LCA requires a larger institutional paradigm shift in addressing the needs of the postgraduate learner in transition.

Chapter 6

6 Integration

6.1 Integration Overview

At the conclusion of these two studies, we can observe that there are similarities in the experiences and feelings of both groups while at the same time there are important differences to note. Through exploration of both similarities and differences more knowledge is gained to enhance transitions for FMRs, to improve support and training for clinical preceptors, and to nurture many different relationships within the Department of Family Medicine and potentially decrease the risk of burnout in both study populations.

6.1.1 Competing Feelings of Excitement and Fear

Both FMRs and preceptors described feelings of excitement surrounding the transition to first year of residency, as well as a sense of fear or worry about patient safety. FMRs understandably expressed great excitement about assuming more clinical independence as a resident, gaining a professional identity, and being able to integrate academic knowledge into clinical experience. At the same time, they articulated intense fear of causing harm to patients. Similarly, preceptors noted the excitement of providing a nurturing and mentorship role for the next generation of Family doctors.

While preceptors did not experience a parallel set of emotions there should be discussion amongst preceptors and residents to ensure an awareness of the myriad of emotions that FMRs experience during their very intense transition. Training and professional development for preceptors could also improve awareness and allow preceptors to understand some of the various stressors possibly contributing to a resident in difficulty or not gaining confidence at an expected pace. This notion is well supported by the literature exploring “learner-centered teaching” (pg. 191) as described by Weston and Brown (63). Understanding both the learner and their context (described as opportunities

and constraints of the learning environment) is a fundamental component in enhancing the "Learner-Teacher Relationship" (pg. 213) (65).

6.1.2 Prior Experiences with Transition and the Impact on Learning and Teaching

Dissecting the similarities and differences around prior experiences with transitions brings interesting insights to the importance of teaching experience and mentorship for preceptors and also highlights the importance of being learner-centered. FMRs were notably younger than preceptors and could only draw on past personal experiences with transitions which were sometimes very personal and intense (i.e.: the loss of a close family member). The importance of being learner-centered and gaining an understanding of the learner as a whole person can be essential in enhancing the learner-preceptor relationship and helping residents adjust to their transition to residency (65). Moreover, understanding life context, current and past life events, will allow preceptors to better understand how to build on past experiences in the context of medical learning and help foster professional growth and resilience. This idea is well supported by multiple theories of learning that emphasize the importance of the learner. Specifically, Brown and Weston (65) note how the constructivist learning theory acknowledges that prior knowledge shapes new understanding and thus the role of the clinical preceptor must include exploring prior knowledge, beliefs and concepts to better understand how new knowledge is acquired.

Conversely, preceptors reflected on both personal and professional experiences during the transition. The importance of teaching experience and having a network of peer or senior faculty support was described as central crucial support for more junior preceptors who have less prior teaching experience to draw upon. Cascade mentoring for junior faculty and peer teaching support for more seasoned faculty as well as continuing professional development to support preceptors working with FMRs in their transition is critical in training programs to ensure continued and improved teaching experiences for preceptors and learner-centered teaching for FMRs (63). As explored in Chapter One, a body of research by Westerman et al. (2,19,39), emphasized the fundamental importance of contextual characteristics (i.e.: formal training to supervise learners and availability of

senior staff for mentorship) to support new clinical supervisors across all disciplines of medicine in Denmark and the Netherlands. This research clearly demonstrated that social support was correlated to lower emotional burnout scores (39). Additionally, retention of junior staff should be a mandate for post-graduate programs to ensure clinical teaching experience and expertise development. As study participants noted the joy they experience while teaching, their concerns were also shared loudly and clearly; much more training for preceptors is needed for them to feel confident working with learners in transition and tangible support is critical when working with a learner in difficulty.

6.1.3 Professional Relationships in Family Medicine

The prominent theme of relationships in both studies again highlights both the overall importance of relationships during this transition period as well as the differences in the weighting of these relationships between the two study groups. Preceptors focused heavily on the LPR whereas near-peers, family and friends were noted as important relationships for FMRs. Programs should emphasize and even formalize more opportunities for near-peer mentoring relationships to enhance the transition experience for residents. Additionally, preceptors might consider the value of near-peer teaching as another way to support FMRs beyond the traditional learner-preceptor dyad. The importance of near-peer relationships is again strongly rooted in concepts introduced to organizational psychology in the 1990s (11). Peers (commonly referred to as “coworkers” in the Organizational Psychology literature) were important agents in the four key tasks of the socialization process as described in Chapter One and include: task mastery, role clarification, acculturation and social integration (11). Role clarification from both supervisors and coworkers was especially critical in completing task mastery (11). This is akin in medical education to achieving core competencies through feedback from clinical preceptors and peers.

6.1.4 The Evolving Learner and Need for Formalized Preceptor Training

The theme of the evolving learner offers insight into an important experience for preceptors depending on their level of prior teaching experience. Preceptors had varying approaches to the evolving learner depending on prior experience. They noted their approach to the evolving learner developed and evolved over time but noted a distinct lack of formalized training to support the resident in transition and the resident in transition who was in difficulty. This further highlights the importance of cascade mentoring for junior faculty as well as continued professional development when working with FMRs in transition and in difficulty. In terms of training there is a national accreditation standard for formal preceptor training that must be met through the Standards of accreditations in residency training programs: family medicine and enhanced skills ("The Red Book") published by the College of Family of Physicians of Canada (50). Family Medicine standards specifically state, "Faculty should be knowledgeable about the principles and theories of teaching and learning, and other appropriate educational theory and techniques. This must be ensured through an effective program of faculty development" (pg. 17) (50). Moreover, The Red Book recommends that faculty development should be faculty-centered and be based on the needs of individual full and part-time teachers (50). Furthermore, programs such as Western's post-graduate Family Medicine Program would likely benefit from adopting more formalized committees to support learners in difficulty as well as the preceptors working with them similar to other Canadian programs such as the University of Ottawa Postgraduate Department of Family Medicine's Academic Support Process as previously described in Chapter Four.

6.1.5 Developing a Department of Post Graduate Family Medicine Community of Support

We see many opportunities to enhance and nurture valuable relationships within the Post Graduate Department of Family Medicine. Both groups stressed the need to bridge institutional and relationship gaps within the Family Medicine program. FMRs described

an intense lack of connection to the Family Medicine program early in their transition and sought peer relationships as well as an early presence from their Family Medicine primary preceptor. Formalizing communication expectations and protocols to ensure early and consistent communication between FMRs and their primary Family Medicine preceptor regardless of rotation schedule is necessary for FMRs to feel connected and to build and nurture this relationship within the community of Family Medicine. Moreover, ensuring regular near-peer or formalized peer-mentorship programs would fill a gap identified by the participants of both studies. Local research specific to the influence on the future intended breadth of practice of Ontario FMRs has shown the important impact of peers (41). One could imagine the many positive ways strong near-peer role models could be leveraged to help support FMRs as they transition into residency and practice. It is possible that peer influence could even further shape the breadth of skills and types of practice adopted by future family physicians.

The development of a multifaceted community within the Department of Post-Graduate Family Medicine is necessary to create opportunities for support, networking and team-building for both FMRs and clinical preceptors. This will help to ensure FMRs are supported through this intense transition and promote the development of a positive professional identity. As program directors and faculty are currently coping with a system-wide transition to the Triple C curriculum (67,68), it is very important to note the ongoing individual transitions experienced by learners and be aware of the negative feelings and potential consequences to learners and to patient safety. This research can add to the body of evidence to allow Department Chairs to disrupt currently accepted training norms and strive to acknowledge and act on individual learner experiences. Redesigning the curricular landscape to one that focuses on learner needs, promotes healthy socialization and relationship building with preceptors, peers and other Departmental administrators is a first step. This may allow residents to further thrive and allow programs to train learners with the habits, behaviours, skills and knowledge to fulfill their professional obligations and provide the best possible, and best principled, care to their patients in keeping with the principles of Family Medicine.

Similarly, support for junior clinical preceptors and seasoned preceptors alike will allow positive experiences supervising FMRs to continue. Supports such as a formalized mentoring system, orientation, and preceptor-driven teacher training will help to ensure the various burdens that contribute to negative feelings of frustration and feeling unprepared when residents are experiencing difficulty are dampened. In addition to clear Canadian accreditation standards, as noted above, the work of Westerman and colleagues (39) provides compelling evidence to support these formal contextual support systems. As previously described, Westerman et al. (39) found that formalized systems helped to decrease burnout in new consultants in their teaching and clinical work. A robust and formalized orientation, mentoring network and support system will hopefully perpetuate a legacy of positive and enthusiastic Family Medicine clinical educators at Western University.

Bibliography

1. Ringsted C. Developmental aspects of medical competency and training: issues of curriculum design. Med Educ [Internet]. 2011 Jan 14 [cited 2014 Jan 21];45(1):12–6. Available from: http://doi.wiley.com/10.1111/j.1365-2923.2010.03869.x
2. Teunissen PW, Westerman M. Opportunity or threat: the ambiguity of the consequences of transitions in medical education. Med Educ [Internet]. 2011 Jan [cited 2014 Jan 30];45(1):51–9. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21155868
3. Cave J, Woolf K, Jones A, Dacre J. Easing the transition from student to doctor: how can medical schools help prepare their graduates for starting work? Med Teach [Internet]. 2009 May [cited 2014 Jan 30];31(5):403–8. Available from: http://www.ncbi.nlm.nih.gov/pubmed/19142797
4. Holmboe E, Ginsburg S, Bernabeo E. The rotational approach to medical education: time to confront our assumptions? Med Educ [Internet]. 2011 Jan [cited 2014 Jan 30];45(1):69–80. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21155870
5. Flexner A. Medical Education in the United States and Canada: A Report to the Carnegie Foundation for the Advancement of Teaching [Carnegie Foundation Bulletin No. 4]. New York, NY; 1910.
6. Erikson E. Childhood and society. New York: W.W Norton & Co.; 1950.
7. Erikson E. Identity and the life cycle. New York: International Universities Press; 1959.
8. Erikson. Young man Luther: A study in psychoanalysis and history. New York: Norton; 1956.
9. Kroger J, Marcia JE. The Identity Statuses: Origins, Meanings, and Interpretations. In: Schwartz SJ, Luyckx K, Vignoles VL, editors. Handbook of Identity Theory and Research [Internet]. New York, NY: Springer New York; 2011 [cited 2012 Nov 2]. p. 31–54. Available from: http://www.springerlink.com/index/10.1007/978-1-4419-7988-9
10. Nicholson N. A Theory of Work Role Transitions. Adm Sci Q. 1984;29(2):172–91.
11. Wolfe Morrison E. Longitudinal Study of the Effects of Information Seeking on Newcomer Socialization. J Appl Psychol. 1993;78(2):173–83.
12. Van Maanen J, Schein E. Toward a theory of organizational socialization. In: Staw B, editor. Research in organizational behaviour. Vol 1. Greenwich, CT: JAI Press; 1979. p. 209–64.
13. Van Maanen. People processing: Stragies of organizational socialization. Organ Dyn. 1978;7:19–36.

14. Feldman D. A contigency theory of socialization. Adm Sci Quarterly1. 1976;21:433–52.

15. Fisher C. Organizational socialization: An integrative review. In: Ferris G, Rowland K, editors. Reserach in personnel and human resource management. Vol 4. Greenwich, CT; 1986. p. 101–45.

16. Katz R. Organizational stress and early socialization experiences. In: Beehr T, Bhagat R, editors. Human stress and cognition in organizations. New York: Wiley; 1985. p. 117–39.

17. Louis M. Surprise and sense-making: What newcomers experience in entering unfamiliar organizational settings. Adm Sci Quaterly. 1980;(25):226–51.

18. Reichers A. An interactionist perspective on newcomer socializationrates. Acad Manag Rev. 1987;12:278–87.

19. Westerman M, Teunissen P. Oxford textbook of medical education. K Walsh. Oxford, UK: Oxford University Press; 2013. 372-381 p.

20. Canada MC of. Route to Licensure.

21. Handfield-Jones R, Belle Brown J, Rainsberry P, Brailovsky C. Certification examination of the College of Family Physicians of Canada. Part 2. Conduct and general performance. Can Fam Physician [Internet]. 1996;42:957–60. Available from: pm:8688698

22. Prince K, Boshuizen H, van der Vleuten C, Scherpbier AJJA. Students' opinions about their prepartion for clinical practice. Med Educ. 2005;39(7):704–12.

23. O'Brien B, Cooke M, Irby D. Perceptions and attributions of third-year struggles in clerkships: do students and clerkship directors agree? Acad Med. 2007;82:970–8.

24. Babaria P, Abedin S, Nunez-Smith M. The Effect of Gender on the Clinical Clerkship Experiences of Female Medical Students: Results From a Qualitative Study. Acad Med. 2009;84(7):859–66.

25. O'Brien BC, Poncelet AN. Transition to clerkship courses: Preparing students to enter the workplace. Acad Med. 2010;85(12):1862–9.

26. Shacklady J, Holmes E, Mason G, Davies I, Dornan T, Shacklady J, et al. Maturity and medical students ' ease of transition into the clinical environment Maturity and medical students ' ease of transition into the clinical environment. Med Teach. 2009;31(7):621–6.

27. Prince K, van de Wiel M, Scherpbier AJJA, van der Vleuten C, Boshuizen H. A qualitative analysis of the transition from t heory to practice in undergraduate training in a PBL medical school. Adv Health Sci Educ Theory Pract. 2000;5(2):105–16.

28. Lempp H, Cochrane M, Seabrook M, Rees J. Impact of educational preparation on medical students in transition from final year to PRHO year: a qualitative evaluation of final-year training following the introduction of a new Year 5

curriculum in a London medical school. Med Teach. 2004;26(3):276–8.

29. Kellett J, Papageorgiou A, Cavenagh P, Salter C, Miles S, Leinster SJ. The preparedness of newly qualified doctors - Views of Foundation doctors and supervisors. Med Teach. 2015;37(10):949–54.

30. Hill J, Rolfe I, Pearson S, Heathcote A. Do junior doctors feel they are prepared for hospital practice? A study of graduates from traditional and non-traditional medical schools. Med Educ. 1998;32(1):19–24.

31. Jones A, McArdle P, O'Neill P. Perceptions of how well graduates are prepared for the role of pre-registration house office: a comparison of outcomes from a tradition and an integrated PBL curriculum. Med Educ. 2002;36(1):16–25.

32. Neill PAO, Jones A, Willis SC, Mcardle PJ. Does a new undergraduate curriculum based on Tomorrow ' s Doctors prepare house officers better for their first post ? A qualitative study of the views of pre-registration house officers using critical incidents. Med Educ. 2003;37(12):1100–8.

33. Cave J, Goldacre M, Lambert T, Woolf K, Jones A, Dacre J. Newly qualified doctors' views about whether their medical school had trained them well: Questionnaire surveys. BMC Med Educ. 2007;7:2003–8.

34. Brennan, N., Corrigan, O., Allard, J., Archer, J., Barnes, R., Bleakley, A., Collett, T. and De Bere SR. The transition from medical student to junior doctor: today's experiences of Tomorrow's Doctors. Med Educ. 2010;44:449–58.

35. Wakeling J, French F, Bagnall G, Mchardy K. Is foundation training producing competent doctors? what do foundation trainees, educational supervisors and nurses in Scotland have to say? Scott Med J [Internet]. 2011;56(2):87–93. Available from: https://doi.org/10.1258/smj.2011.011033

36. Beckett M, Hulbert D, Brown R. The new consultant survey 2005. Emerg Med J. 2006;23:461–3.

37. Higgins R, Gallen D, Whiteman S. Meeting the non-clinical education and training needs of new consultants. Postgr Med J. 2005;81(958):519–23.

38. Westerman M, Teunissen PW, Fokkema JPI, Siegert CEH, van der Vleuten CPM, Scherpbier AJJA, et al. New consultants mastering the role of on-call supervisor: A longitudinal qualitative study. Med Educ. 2013;47(4):408–16.

39. Westerman M, Teunissen PW, Jorgensen RL, Fokkema JPI, Siegert CEH, Van Der Vleuten CPM, et al. The transition to hospital consultant: Denmark and the Netherlands compared on preparedness for practice, perceived intensity and contextual factors. Med Teach. 2013;35(6):481–9.

40. Westerman M, Teunissen PW, Fokkema JPI, Van Der Vleuten CPM, Scherpbier AJJA, Siegert CEH, et al. The transition to hospital consultant and the influence of preparedness, social support, and perception: A structural equation modelling approach. Med Teach. 2013;35(4):320–7.

41. Grierson LEM, Fowler N, Kwan MYW. Family medicine residents ' practice intentions Recherche Les intentions de pratique des résidents en médecine

familiale. Can Fam Physician • Le Médecin Fam Can. 2015;61:524–31.

42. Burns R, Adler M, Mangold K, Trainor J. A Brief Boot Camp for 4th-Year Medical Students Entering into Pediatric and Family Medicine Residencies. Cureus [Internet]. 2016;8(2). Available from: http://www.cureus.com/articles/4036-a-brief-boot-camp-for-4th-year-medical-students-entering-into-pediatric-and-family-medicine-residencies

43. Garcia-Rodriguez J, Dickinson J, Perez G, Ross D, Au L, Ross S, et al. Procedural Knowledge and Skills of Residents Entering Canadian Family Medicine Programs in Alberta. Fam Med. 2018;50(1):10–21.

44. Law M, Lam M, Wu D, Veinot P, Mylopoulous M. Changes in Personal Relationships During Residency and Their Effects on Resident Wellness: A Qualitative Study. Acad Med. 2017;92:1601–6.

45. Schaufeli W, Bakker A, van der Heijden F, Prins J. Workaholism, burnout and well-being among junior doctors: The mediating role of role conflict. Work Stress. 2009;23:155–72.

46. Sandelowski M. Whatever Happened to Qualitative Description? Res Nurs Health. 2000;23:334–40.

47. Sandelowski M. What's in a name? Qualitative description revisited. Res Nurs Health [Internet]. 2010 Feb [cited 2012 Nov 8];33(1):77–84. Available from: http://www.ncbi.nlm.nih.gov/pubmed/20014004

48. Borkan J. Immersion and Crystallization. In: Doing Qualitative Research. 2nd ed. London, United Kingdom: Sage Publications; 1999. p. 179–92.

49. Richards L, Morse JM. Readme First For a User's Guide to Qualitative Methods. 3rd ed. Thousand Oaks: Sage Publications; 2013.

50. CFPC. Specific Standards for Family Medicine Residency Programs Accredited by the College of Family Physicians of Canada "The Red Book." Mississauga; 2016.

51. Ottawa D of FM-F of M-U of. The University of Ottawa's Academic Support Process. 2011.

52. Mann K V. Theoretical perspectives in medical education: past experience and future possibilities. Med Educ [Internet]. 2011 Jan [cited 2014 Jan 21];45(1):60–8. Available from: http://www.ncbi.nlm.nih.gov/pubmed/21155869

53. Aaronson J, Murphy-Cullen C, Chop W, Frey R. Electronic medical records: the family practice resident perspective. Fam Med. 2001;33(2):128–32.

54. Crosson J, Stroebel C, Scott J, Stello B, Crabtree B. Implementing an Electronic Medical Record in a Family Medicine Practice : Communication, Decision Making, and Conflict. Ann Fam Med. 2005;3:307–11.

55. Halas G, Singer A, Styles C, Katz A, Halas G. New conceptual model of EMR implementation in interprofessional academic family medicine clinics Recherche Un nouveau modèle théorique concernant l ' implantation des DME dans les cliniques universitaires interprofessionnelles de médecine familiale. Can Fam

Physician. 2015;61:232–9.

56. Kennedy T, Regehr G, Baker G, Lingard L. “It’s a cultural expectation...” The pressure of medical trainees to work independently in medical practice. Med Educ. 2009;43:645–53.

57. Kennedy T, Regehr G, Baker G, LA L. Preserving professional credibility: grounded theory study of medical trainees’ requests for clinical support. BMJ. 2009;338:128–35.

58. Hafferty F, Franks R. The hidden curricul, ethics teaching and the structure of medical education. Acad Med. 1994;69:861–71.

59. Hafferty F. Beyond curriculum reform: confronting medicine’s hidden curriculum. Acad Med. 1998;73:403–7.

60. Ericsson K. An expert-performance perspective of research on medical expertise: the study of clinical performance. Med Educ. 2007;41(12):1124–30.

61. Ericsson K. The influence of expertise and deliberate practice on the development of superior expert performance. In: Ericsson K, Charness N, Hoffman R, Feltovich P, editors. Cambridge Handbook of Expertise and Expert Performance. Cambrige: Cambridge University Press; 2006. p. 683–704.

62. Bulte C, Betts A, Garner K, Durning S. Student teaching: Views of student near-peer teachers and learners. Med Teach. 2007;29(6):583–90.

63. Weston W, Brown J. Learner-Centered Teaching. In: Stewart M, Brown J, Weston W, McWhinney I, McWilliam C, Freeman T, editors. Patient-Centered Medicine Transforming the Clinical Method. Third. London; 2014.

64. Cooke M, Irby D, O’Brien B. Educating Physicians: A Call for Reform of Medical School and Residency. San Francisco, CA; 2010.

65. Weston W, Brown J. Learning and Teaching the Patient-Centered Clinical Method. In: Stewart M, Brown J, Weston W, McWhinney I, MacWilliam C, Freeman T, editors. Patient-Centered Medicine Transforming the Clinical Method. Third. London: Radcliffe Publishing Ltd.; 2014. p. 165–90.

66. Coulehan J, PC W. Vanquising virtue: the impact of medical education. Acad Med. 2001;76(6):598–605.

67. Triple C Curriculum [Internet]. Western Center for Public Health and Family Medicine. 2018 [cited 2018 Jul 15]. Available from: http://www.schulich.uwo.ca/familymedicine/postgraduate/current_residents/triple_c_curriculum.html

68. Triple C Competency Based Curriculum [Internet]. The College of Family Physicians of Canada. 2018 [cited 2018 Jul 15]. Available from: http://www.cfpc.ca/triple_C/

Appendices

Appendix A: Recruitment Email Invitation

Subject Line: Invitation to participate in research

You are being invited to participate in a study that we, Dr. Britta Laslo, Dr. Judith Belle Brown and Dr. Tom Freeman, are conducting. Briefly, the study involves a one-on-one interview exploring your experiences of transition as a final year medical student preparing to enter into a Family Medicine residency program or as a first year Family Medicine residents actively immersed in this transition. The interview will last approximately 30-45 minutes and will take place at the Western Center for Public Health and Family Medicine located at 1151 Richmond Street in London Ontario.

If you would like more information on this study please see attached 'letter of information.' If you would like to participate in this study or wish more information about this study please contact the researcher at the contact information given below.

Thank you,

Dr. Britta Laslo MD, CCFP
MClSc (FM) Candidate
Department of Graduate Studies
Western University

Appendix B: Letter of Information & Consent

LETTER OF INFORMATION AND CONSENT

Study Title: Transitions in medical education – study 1

Name of Principal Investigator: Dr. Judith Belle Brown

Name of co-investigator: Dr. Britta Laslo, Dr. Tom Freeman

Name of Sponsor: None

Conflict of Interest: We have no conflict of interest to declare.

Introduction: You are being invited to participate in a study on transitions in medical education. This study will explore the experiences of transition of final year medical students planning to enter into a family medicine residency and current experiences of transition of first year Family Medicine residents. The study is particularly interested in the experiences preparing for the transition of final year medical student to first year resident, which is why you are being invited to participate.

Background/Purpose: Transitions in medical education have been shown to be challenging. We want to further investigate the experiences of final year medical students planning to enter a family medicine residency program and current first year Family Medicine residents. We hope that this study will help offer insights and greater understanding of ways that may promote positive transitions for learners.

Study Design: An interpretative phenomenological study design will be used. Data will be collected using one-on-one semi-structured interviews and will be audio-recorded. Interviews will take place at the Center for Studies in Family Medicine located at 1151 Richmond Street in London, Ontario. Participants will be asked questions about their experiences in preparing for and/or being immersed in the transition, and how professional and personal experiences have influenced this experience. If you decide to be part of this study you will be among 10-12 local participants.

Voluntary Participation: Participation in this study is voluntary. You may refuse to participate, refuse to answer any questions or withdraw from the study at any time with no effect on your future (academic status/employment etc).

Withdrawal from Study: Participants reserve the right to withdraw their participation at any time during the study period.

Risks: There are no foreseeable risks in participating in the study.

Benefits: You may not receive direct benefit from being in this study. Information learned from this study may help lead to increase understanding of transitions in medical education.

Rights and Responsibilities: You do not waive any legal rights if you decide to participate in the study. Your responsibilities include participating in a 30-45 minute audio-recorded interview. If you do not wish to be audio-recorded then you should not participate in this study.

Confidentiality: All data collected will remain confidential and accessible only to the investigators of this study. All audio recordings, field notes and transcripts will be kept in a locked file cabinet, at the Center for Studies in Family Medicine, and in locked computer data files to which only the investigators have access. All interviews will be

coded. All data will be kept for 5 years after publication. If you choose to withdraw from this study, your data will be removed and destroyed from our database. Representatives Western University Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

Costs: There are no monetary costs associated with being a study participant. The interview will require approximately 30-45 minutes of the participants' time.

Compensation: Participants will be compensated with a $20.00 coffee shop gift certificate.

Rights as a Participant: If you have any questions about your rights as a research participant or the conduct of this study, you may contact The Office of Research Ethics.

Questions about the Study: Should you have any questions about the study you may contact Dr. Britta Laslo (Study co-investigator).

Consent Form

Project Title:

Transitions in medical education

Study Investigator's Names:

Dr. Judith Belle Brown (Primary Investigator), Dr. Britta Laslo (Co-investigator), Dr. Tom Freeman (Co-investigator)

I have read the Letter of Information, have had the nature of the study explained to me and I agree to participate. All questions have been answered to my satisfaction.

Participant's Name (please print):

_____

Participant's Signature:

_____

Date:

_____

Person Obtaining Informed Consent (please print):

_____

Signature:

_____

Date:

_____

Appendix C: Interview Guide Study 1

Study 1 - Transitions in Medical Education

Research Objective:

What are the feelings and experiences of family medicine clinical preceptors in supervising first year family medicine residents during transition periods in their medical education?

Demographic Information:

Can you please state the cumulative number of years you have been in independent family medicine practice?

Can you please state the cumulative number of years you have supervised first year FM residents?

What is your geographic practice setting?

Questions:

What have been your experiences supervising first year family medicine residents during transition periods in their medical education?

How do you feel about these experiences?

What do you think are personal and professional challenges faced by residents during this time of transition?

Do you believe there is a seasonality to transitions?

What have your experiences been working with the ‘millenial learner’ during this transition?

Has technology impacted these transitional experiences?

(Below questions will be optional, if needed)

How have your professional relationships (eg: professional role models, relationships with colleagues, chairs of departments) influenced the experience of supervising first year family medicine residents during transition periods in their medical education?

How have your personal relationships (eg: friends, partners, family) influenced the experience of supervising first year family medicine residents during transition periods in their medical education?

How have specific events in your medical career influenced your experience of supervising first year family medicine residents during transition periods in their medical education?

How have lived life events outside of your medical career influenced your experience of supervising first year family medicine residents during transition periods in their medical education?

Appendix D: Interview Guide Study 2

Study 2 - Transitions in Medical Education

Research Objective:

What are the feelings and experiences of first year family medicine residents about their transition from final year medical student to first year family medicine resident?

Demographic Information:

Can you please state your age?

Where did you complete your undergraduate degree?

What primary clinic are you working from (home-base)?

Questions:

What have been your experiences in the transition from final year medical student to first year resident?

How do you feel about these experiences?

(Below questions will be optional, if needed)

How have your professional relationships (eg: professional role models, preceptors, student advisors) influenced the experience of the transition from final year medical student to first year resident?

Have there been any non-physician role models that have influenced this experience?

How have your personal relationships (eg: peer relationships, partner, family) influenced the experience of the transition from final year medical student to first year resident?

How have specific events in your medical education influenced your experience of the transition from final year medical student to first year resident?

What were your biggest fears going into this transition?

Did you experience a transition from academic teaching as a medical student/clerk to clinically relevant teaching as a resident?

Did the use of technology in health care influence this transition? If so, how?

Do you feel the transition could have been better supported by your primary preceptor, your clinic, the department of Family Medicine or the larger post-graduate department of medicine?

What is it about you that influences how you approach transitions? (What are your personal attributes that influence your transition?

How was the transition to being a resident-teacher with clerks and medical students?

Curriculum Vitae

Name: Britta Laslo

Post-secondary Education and Degrees:

University of Ottawa
Ottawa, Ontario, Canada
2004-2008 B.HSc.

McMaster University
Hamilton, Ontario, Canada
2008-2011 M.D.

Western University
London, Ontario, Canada
2011-2013 Postgraduate Family Medicine Residency Training.

Western University
London, Ontario, Canada
2013-2014 Academic Family Medicine Enhanced Skills Training.

Western University
London, Ontario, Canada
2013-present Master's of Clinical Sciences in Family Medicine.

Honours and Awards:

Resident Teacher of the Year Award, Ontario College of Family Physicians, Toronto, Ontario, 2013

Professional Association of Residents of Ontario Resident Teaching Award, Western University, London, Ontario, 2013

Volunteer of the Year, The Association for the Special Needs, University of Ottawa, Ottawa, Ontario, 2008

Volunteer of the Year, Health Promotion International Health Promotion Team, University of Ottawa, Ottawa, Ontario, 2006

Top 100, Faculty of Health Sciences, Recognizing students with outstanding academic achievement. University of Ottawa, Ottawa, Ontario, 2004-2008

Recipient, Academic Merit Bursary, University of Ottawa, Ottawa, Ontario, 2004-2008

Recipient, Faculty of Health Sciences Entrance Scholarship. University of Ottawa, Ottawa, Ontario, 2004

Related Work

Experience

Nov 2017 – present	Locum Tenens, Crown Point Family Health Team, Hamilton, Ontario
Sept 2017 – present	Professional Competencies Longitudinal Facilitator, Michael G. DeGroote Medical School, McMaster University, Hamilton, Ontario
August 2017	Locum Tenens – Hamilton Family Health Team, Hamilton, Ontario
June 2017	Locum Tenens – Family Medicine and Emergency Medicine, Manitoulin Health Center, Manitoulin Island, Ontario
May 2017	Locum Tenens – Family Medicine and Emergency Medicine, Wilson Memorial Hospital, Marathon, Ontario
Feb 2017 -present	Physician, Locke Street Medical Clinic (Family Medicine), Hamilton Ontario
July 2014 – present	Hospitalist Physician, Brantford General Hospital, Brantford, Ontario
July 2014 – present	Assistant Clinical Professor, Department of Family Medicine, McMaster University, Hamilton, Ontario
July 2013 - present	Physician, Medically Complex and Palliative Care, St. Peter's Hospital (Hamilton Health Sciences), Hamilton, Ontario, Canada
May-July 2016	Co-tutor, Medical Foundation 4 (Allergy/Immunology and Neoplasm) Academic Pre-clerkship Curriculum, Michael G. DeGroote School of Medicine
November 2015	Locum Tenens – Family Medicine and Emergency Medicine, Wilson Memorial Hospital, Marathon, Ontario
Feb – Aug 2015	Physician, AMICA Nursing Home, Dundas, Ontario

Sept 2014 –Nov 2015 Professional Competencies Longitudinal Facilitator, Michael G. DeGroote Medical School, McMaster University, Hamilton, Ontario

Aug 2014 – Aug 2015 Physician, Wentworth Lodge Long-term care residence, Dundas, Ontario

June 2014 – Aug 2015 Family Physician, Hamilton Family Health Team, Dundas, Ontario

Mar 2014 – Nov 2015 Physician Facilitator, The Center for Health Professionals Educated Abroad (CEHPEA), Toronto, Ontario, Canada

Jan 2013 –Oct 2016 Physician, St. Peter's at Chedoke Long-term care residence, Hamilton, Ontario, Canada

Publications:

John R. Kirwan, Stanton Newman, Peter S. Tugwell, George A. Wells, Sarah Hewlett, Leanne Idzerda, Britta Laslo, Lyn M. March, Patricia Minnock, Pam Montie, Jo Nicklin, Tamara Rader, Pamela Richards, Tessa C. Sanderson, Maria Suarez-Almazor, Elizabeth Tanjong-Ghogomu, Erin Ueffing, and Vivian Welch. Progress on Incorporating the Patient Perspective in Outcome Assessment in Rheumatology and the Emergence of Life Impact Measures at OMERACT 9. *The Journal of Rheumatology* 2009;36 (9): 2071-2076.