PROFESSIONAL IDENTITY FORMATION OF SURGICAL RESIDENTS

PROFESSIONAL IDENTITY FORMATION OF SURGICAL RESIDENTS OVER THEIR FIRST YEAR OF POSTGRADUATE TRAINING

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Lay Abstract

This thesis explores how surgical residents form their professional identity–or understanding of what it means to be a medical professional–over the course of their medical training program. Participants were first interviewed at the start of their training program to examine their current understanding of what it means to be a medical professional. Six months later, participants completed a second interview to explore how their experiences within their training program have changed this understanding. This information can help identify the aspects of training that students consider important to their professional development, and allow programs to be structured in a manner that supports students as they progress towards becoming independent practicing surgeons. Thus, the goal of this thesis is to not only improve medical education programs, but also the quality of patient care.

Abstract

Professional identity is defined as the internalized values of a profession as a representation of the self, and is formed through a process of socialization, or how a student learns to become a member of their profession. As medical students transition to residency, new social environments, clinical experiences, and curricular emphases can impact how they identify as professionals. The purpose of this thesis is to investigate how professional identity formation (PIF) occurs in surgical residents over their first year of postgraduate training. Twenty-four surgical residents were interviewed at the start of their postgraduate training. Questions explored participants' understanding of what it means to be a medical professional. Six months later, residents completed a follow-up interview to investigate how their experiences in their training programs have influenced their professional identity. Thematic analysis was utilized to identify themes in responses. Central to participants' understanding of their professional identity was their relationships with patients and the public, other healthcare professionals, their training program, and their own expectations for themselves. After six months, less emphasis was placed on the influence of the public and one's own personal expectations. Factors such as patient encounters, a team-based work environment, time constraints and high volumes of work, and being prepared for all situations were all identified as crucial to professional development. It is important for medical education programs to consider their impact on the development of students, especially regarding

the transition to competency-based medical education (CBME) that is currently occurring in medical education. This change could impact the social environment and formal curricula of these programs. The explicit study of PIF is important not only for students as they develop into independent health professionals, but also to ensure the proper care of the patients these surgeons will be working with.

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List of Abbreviations & Symbols

CBD:	Competence-by-design
CBME:	Competency-based medical education
EPA:	Entrustable professional activity
HIREB:	Hamilton Integrated Research Ethics Board
PIF:	Professional identity formation
PSIQ:	Professional Self-Identity Questionnaire

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Declaration of Academic Achievement

Interview templates were designed by myself, under the supervision of Dr. Sonnadara. Participant recruitment and data collection for both sets of interviews was also completed by myself. For the initial interviews, myself, Cindy Tran, and Tianna Murray transcribed the interviews, and myself and Cindy Tran conducted data analysis. For the follow-up interviews, myself and Kathleen Howcroft transcribed the interviews and conducted data analysis.

Throughout the entire process, Dr. Sonnadara, Dr. Walsh, Dr. Reid, and Jeni Zering provided constant guidance, consultation, and support. My appreciation for their assistance–and the help of others–can be found in the acknowledgments section.

The work presented in this thesis will be submitted for publication in an academic journal.

Introduction

What is professional identity?

Professional identity refers to internalized values of a profession as a representation of one's self (Cruess, Cruess, Boudreau, Snell, & Steinart, 2014). Professional identity within a medical education context can be dated back to the days of Hippocrates: the Hippocratic Oath calls upon physicians to commit to their profession as if it were their second family and to demonstrate loyalty to the values of this family through their service to the public (Cohen, Kay, Youakim, & Balaicuis, 2009). In 1957, sociologist Robert K. Merton described the goal of medical education as "to shape the novice into the effective practitioner of medicine, to give him the best available knowledge and skills, and to provide him with a professional identity so that he comes to think, act, and feel like a physician" (Cruess et al., 2014). Despite its historical roots, professional identity went largely ignored in medical training programs until recent years; in 2010, the Carnegie Foundation reported that professional identity formation (PIF) should be the backbone of medical education (Cruess, Cruess, & Steinart, 2016).

One important distinction to be made is the difference between professionalism and professional identity. If professional identity is thought of as thinking, acting, and feeling like a physician, professionalism is the notion of acting like a professional (Cohen, 2007). There has been increased emphasis on the inclusion of professionalism in medical education curriculum over the past few decades (Cruess et al., 2016; Holden, Buck, Clark, Szauter, & Trumble, 2015). This "professionalism movement" stemmed

from a recommitment to the vision of Hippocrates: the relationship between physician and patient is built around patients' trust in physicians, and the professional behaviour and appearance of the physician can help maintain this relationship (Cruess & Cruess, 1997). As a result, teaching methods and assessments regarding professionalism began to be devised and implemented in medical training programs, centered around this notion of behaving like a professional (Cruess et al., 2016). Thus, the study of professionalism–and professional identity, consequently–is oftentimes measured through the observable behaviours associated with the concept. Some of these behaviours associated with PIF include accountability, perfectionism, self-management, self-critique, teamwork, initiative, innovation, and leadership (Cope, Benzemer, Mavroveli, & Kneebone, 2017).

In 1996, the Royal College of Physicians & Surgeons of Canada introduced the CanMEDS framework "to help prepare physicians to meet societal needs in a dynamic and increasingly demanding health care environment" (Frank, Snell, & Sherbino, 2015). The framework has since been updated twice, once in 2005 and once in 2015. The CanMEDS framework has been adapted for use in medical education programs in the Netherlands, and similar frameworks exist in the United States (the Accreditation Council for Graduate Medical Education Outcomes Assessment Project) (Swing, 2007) and the United Kingdom (the competency-based Intercollegiate Surgical Curriculum Programme) (McKee, 2008). The CanMEDS 2015 framework identifies seven different roles, or domains of competence, which are required of physicians to effectively meet

the health care needs of the public (Frank et al., 2015). Professional is included as one of these seven roles, with professional identity listed as a key concept under this role. Specifically, the framework outlines three enabling competencies related to professional identity: "exhibit appropriate professional behaviours and relationships in all aspects of practice, demonstrating honesty, integrity, humility, commitment, compassion, respect, altruism, respect for diversity, and maintenance of confidentiality"; "exhibit self-awareness and manage influences on personal well-being and professional performance"; and "manage personal and professional demands for a sustainable practice throughout the physician life cycle" (Frank et al., 2015).

Why is professional identity important?

Critics of explicitly addressing professional identity formation in medical education argue that it can result in social engineering (Barnett, 2010). The goal of medical education should not be the integration of individuals into a single standardized professional identity (Frost & Regehr, 2013), and the normalization of certain values or behaviours can be alienating or exclusory to some groups of students. The reliance on observable behaviours as a measure of professionalism or professional identity misses many important aspects of the concepts (Hodges, 2013) and actually discredits the complex, dynamic nature of being a professional (Fish & de Cossart, 2006). Breaking down professional identity into an objective list of behaviours suggests professional identity is a collection of external behaviours that can be mastered rather than ideals and values that must be internalized (Trede, Macklin, & Bridges, 2012). Furthermore,

these ideals and values must be internalized in a manner that creates a holistic, coherent professional identity (Jarvis-Selinger, Pratt, & Regehr., 2012).

Nonetheless, PIF of students should be at the core of medical education programs (Cruess et al., 2014). Explicitly addressing professional identity in training curricula is crucial for the development of knowledge and expertise: "for practice to be learnt, and for professional identity to be formed, it is necessary to be able to share and articulate motivations for actions" (Trede et al., 2012). Considering the level of the learner and their understanding of their professional identity can also help training programs enhance teaching methods (Ginsburg & Lingard, 2011; Hilton & Slotnick, 2012). Students may be unable to understand what is relevant in the eyes of the expert physician, simply because of qualitative differences in thinking. Understanding how professional identity is formed can help enhance teaching methods by understanding exactly how students approach problems.

Outside of a teaching context, professional identity can have major implications on appropriate practice, self-care, and self-awareness, all highlighted as enabling competencies by the CanMEDS framework. As stated by Hafferty:

> …the fundamental uncertainties that underscore clinical decision making and the ambiguities that permeate medical practice, require a professional presence that is best grounded in what one IS rather than what one DOES. (2009)

Indecision can arise when one has to stop and question "what would a professional do" rather than internalizing, thinking, and feeling like a professional. In clinical settings,

these uncertainties or delays in decision-making can have major implications on patient outcomes. In regard to self-care, studies have shown that medical professionals experience more job-related stress than other professions and are at a higher risk for burnout (Schaufeli, Leiter, & Maslach, 2008). A strongly rooted professional identity and emphasis on professional identity in training programs can be beneficial to students' well-being (deLaason, Just, Stegeager, & Malling, 2016; Schaufeli et al., 2008). Finally, as students progress through their training programs and into eventual independent practice, their self-concept and self-esteem will ultimately drive how they approach and understand their profession on a daily basis (Goldie, 2012).

Thus, in response to the criticisms of PIF, professional identity should not be thought of as an attempt to standardize and compartmentalize values, but rather to critically appraise one's place within their profession. While there are certain skills, values, and behaviours that are accepted as universal characteristics of healthcare, and expected of the profession by society (Cruess et al., 2014), the context of healthcare is constantly being shaped by individual and societal attitudes. Ideals must be in continuous renegotiation with the world around them. As explained by Trede et al.:

> Professionalism needs to be seen as a responsibility to make judgments and decisions in the context of practice. Contemporary professionalism might need to be underpinned by a professional identity that is about knowing what one stands for and, closely linked to this, is professionalism which is taking responsibility for one's action. Professional identity formation means becoming

> aware of what matters most in practice, what values and interests shape decision making. (2012)

How is professional identity formed?

Identity formation is a complex process which can be viewed across multiple different domains (Cruess, Cruess, Boudreau, Snell, & Steinart, 2015; Jarvis-Selinger et al., 2012). One's personal identity plays an important factor in the formation of their professional identity. Professional identity is ultimately a part of the overall identity formation process, and thus, understanding how individuals interpret, understand, and position themselves in their world in general is necessary for observing the construction of their professional identity (Holden et al., 2012). Apart from personal characteristics, an individual's relationships with other individuals and social status within a group are influential to professional identity (Cruess et al., 2015; Jarvis-Selinger et al., 2012). These different domains should, ideally, develop collaboratively in an individual to form a "fully integrated moral self" whose personal and professional values are consistently applied (Kegan, 1982). This moral development plays an important role in the PIF process (Holden et al., 2016; Monrouxe, 2009) and should provide individuals with a sense of coherence to guide their actions (Goldie, 2012). Moreover, it should help establish a humanistic approach to patient care (Cohen et al., 2009; Holden et al., 2016). This approach serves to reconcile the needs of the patient with the demands of the profession to optimize patient care (Coulehan & Williams, 2001).

Literature on how human beings develop their personal identity has shaped the conceptualization on how professional identity is formed (Cruess et al., 2015). Developmental psychologists have theorized how individuals mature through life experiences–typically organized in stages beginning in infancy–to make sense of their world and construct their persona. These theories approach identity as a complex integration of how one views themselves, their relationships with other people, and their status within social groups and society. Naturally, PIF follows a similar process, rooted in the qualitative changes seen in individuals as they progress through different developmental stages.

Kegan's framework for professional development

One common framework that has been used in a medical education context to help understand the formation of professional identity is Robert Kegan's framework for professional development (1982). Kegan's framework is built around the work of developmental psychologists such as Piaget and Kohlberg; however, it views professional development as a lifelong activity that occurs in a multitude of different settings, rather than a process that is strictly focused in childhood and adolescence. Central to the framework is the idea of meaning-making, or how one makes sense of their place and their experiences in their world. Meaning-making is represented through the relationship between subject and object, or between one's internal self and their external world, which constantly shifts between an independent and collective understanding of what it means to be a professional, as represented by the figure in

Appendix A. This process takes place through six different "evolutionary truces", or stages; individuals transition through these stages when certain experiences challenge the balance between the subject and object. Examples of experiences that can challenge this balance include workplace stressors, ambiguous roles within a team, or disillusionment with one's profession (Kegan, 1982).

The first two stages of Kegan's framework, *the incorporative self* and *the impulsive self*, are most synonymous with birth, infancy, and childhood, and thus usually not included in literature using this framework to explore professional development (Cruess et al., 2015; Heinricks, Osats, & Lovat, 2013, p. 488). In the impulsive self, one mainly identifies through their impulses without mediation. They identify with their world through their impulsive needs, and incorporate any external factors that can serve these needs into the internal self. Anything that is not perceived as directly serving one's needs is seen as an object. In the next stage, *the imperial self*, one transitions from solely identifying with their needs to being an individual that has needs. In this stage, the self begins to emerge, and an understanding of how one exists in relation to their world. This includes recognizing the role of others, specifically as a means to achieving one's needs; however, through what Kegan refers to as containment, one comes to understand that their needs do not always match up with the needs of others. Thus, in order to belong within a group, one abandons their own individual needs to meet the needs of their profession as *the interpersonal self*. One comes to identify as a product of their relationships, and lack an independent self. In *the institutional self*, one transitions

from “I am my relationships” to “I have relationships”, usually in response to the conflicting demands of multiple different groups. In this stage, one has an independent self, and is able to balance multiple institutions. It is these middle three stages–the imperial self, the interpersonal self, and the institutional self–that are cited as the most relevant to students in medical training programs (Cruess et al., 2015). The final stage, *the interindividual self*, is not always achieved by all professionals. Transition to this final stage is typically initiated by feelings of isolation or stagnation driven by the independent institutional self. The individual comes to reflect on the relationship between the self and society, gaining the ability to maintain their self-identity while forming meaningful, intimate relationships with others: “they critically assess aspects of the profession, yet remain strongly committed. They are authentic persons who may emerge as leaders in the profession” (Kalet & Chou, p. 122). Kegan’s framework has been applied to a number of different professional contexts, including dentistry and military (Cruess et al., 2015).

Socialization

Based on the work of Robert Kegan, as well as their own teaching experiences, a group of educators from McGill University developed a schematic representation of PIF in a medical education context (Cruess et al., 2015). This schematic can be viewed in Appendix B. At the center of the diagram is socialization, or how a person learns to function as a member of a group. Professional identity is formed through students’ immersion in a new work environment with new colleagues and responsibilities: as a

student spends more and more time within a training program, they come to understand what is expected of them as a member of that profession (Hilton & Slotnick, 2005). This process is rooted in negotiation. All students will enter their training program with pre-conceived notions of who they are, what they value, and what they believe it means to be a medical professional (Hilton & Slotnick, 2005; Holden et al., 2015). As they experience their training program, they must accept all or part of this new identity, reject the new identity altogether, or come to a compromise between new and preexisting notions of identity (Cruess et al., 2015). This is analogous to Kegan's concept of containment. Kegan describes the "culture of embeddedness" that holds individuals within evolutionary truces, and the confirmation, contradiction, or continuity that either keeps them within a stage or allows them to progress to the next stage (Kegan, 1982). PIF can be thought of as a constant deconstruction of past identities followed by the construction of a new identity (Jarvis-Selinger et al., 2012; Pratt, Rockmann, & Kaufmann, 2006).

Communities of practice refers to "groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly" (Wenger, 1999). A community of practice is a broad term that has been applied to numerous professional fields; however, it is defined by a few key features (Gray, 2004). First, communities of practice occur in a specific domain that requires a certain level of competence for membership. Second, members engage and learn through collective activities that "build relationships and form a community around the domain" (Gray,

2004). And finally, the members of the community develop shared experiences, stories, practices, and problem-solving tools to aid them as they work in their specific domain. The concept of a community of practice can help highlight the socialization that occurs in medical education programs (Cruess et al., 2015; Goldie, 2012). As students enter a training program, they engage in a community of practice with the goal of becoming more knowledgeable or more skilled in their field (Lave & Wenger, 1991), and their social interactions with other health care professionals, or professionals in training like themselves, help promote this learning (Cruess et al., 2015; Goldie, 2012). Students enter a program wishing to belong to a community, and eventually, through their participation, they adapt the norms, language, tasks, and organizing principles of their domain (Jarvis-Selinger et al., 2012). Guided by social learning theory, this transition from "legitimate peripheral participation"–i.e. simple, low-risk tasks, usually based in observation–to full-participation in a field, as well as the sense of belonging that comes with the participation, guides the acquisition of one's professional identity (Lave & Wenger, 1991).

Socializing factors

The figure in Appendix C highlights multiple factors that can influence the process of socialization (Cruess et al., 2015). Although individuals may experience these factors differently, two are highlighted as having the greatest impact on students: role models and mentors, and clinical and non-clinical experiences. Both of these can be

experienced through conscious reflection and learning, and unconscious acquisition of knowledge.

Role models are established members of the community of practice that a student enters at the onset of their training who are "admired for their ways of being and acting like a professional" (Côté & Leclère, 2000). Role models can influence the PIF of students through students' active observation, imitation, and practice under their guidance, as well as through the unconscious patterning of behaviours (Cruess et al., 2015). This can help students transition from the periphery to the center of a community of practice. Although formal teaching and assessment are important in explicitly revealing the goals and expectations of a profession (Cohen, 2007; Cruess et al., 2014; Holden et al., 2012), informal instruction and the social structure of a program is often more successful in conveying these ideas (Goldie, 2012). Stern & Papadakis highlight the influence established members of a field can have on students:

> When teaching students our core values, we must consider the real world in which they will work and relax. The concept of "teaching" must include not only lectures in the classroom, small group discussions, exercises in the laboratory, and care for patients in clinic but also conversations held in the hallway, jokes told in the cafeteria, and stories exchanged about a "great case" on our way to the parking lot. (2006)

Similarly, clinical and non-clinical experiences can impact socialization and the formation of professional identity. Specifically, working directly with patients and their families

early in medical training can have a profound effect on PIF (Barr, Bull, & Rooney, 2012) and emphasize a humanistic, patient-centric approach to being a professional (Cohen, 2007).

It is important not to understate the importance of the individual in developing their own professional identity. As previously mentioned, professional identity is ultimately a part of the overall identity formation process (Holden et al., 2012). Thus, although role models, mentors, clinical, and non-clinical experiences are all identified as having significant impacts on socialization, all students will experience these factors differently (Cruess et al., 2015). For example, role modelling is driven not only by a student's representation of who they would like to be as they progress as a professional (Niemi, 1997) but also who they are not (Jenkins, 2008). Roccas & Brewer propose the complex nature of identity can force students to identify more or less with different aspects of who they are when working in group environments (2002). This can have major implications on how students engage with and emulate role models, especially for those who identify as visible minorities who may not be well represented in the context of their training program (Monrouxe, 2010; Slay & Smith, 2011). With this in mind, it is important to consider students' active role in meaning-making, and the role that reflection plays in the socialization process (Goldie, 2012). Explicit reflection by the student helps them understand their own personal values and beliefs, and how they are integrated into the new knowledge and experiences provided through their training program (Cruess et al., 2015; Mann, Gordon, & MacLeod, 2009). Emphasizing the need

for reflection can help foster their awareness of the impact of their training program on their PIF and can encourage the conscious framing of their own role in health care (Cope et al., 2017; Hilton & Slotnick, 2004; Irby & Hamstra, 2016; Mann et al., 2009; Wald, 2015).

Other health care professionals not explicitly viewed as role models can also play an important role in the socialization process: for example, nurses might not be in a supervisory role or formally assessing the progression of medical students, but their interactions with students, residents, and physicians can still provide important learning opportunities regarding what it means to be a professional (Jarvis-Selinger et al., 2012). Peer groups can convey information regarding what is deemed an acceptable amount of time to take on different roles and responsibilities, and can provide a strong sense of social inclusivity within a community of practice (Weaver, Peters, Koch, & Wilson, 2011). Additional socializing agents include the symbolic rituals that make an individual feel like a member of a group (Cruess et al., 2015), the use of language and discourse within a training program (Ginsburg & Lingard, 2011; Monrouxe, 2009), and relationships with family, friends, the general public, etc. outside of medical education (Cruess et al., 2015).

Formal teaching and assessment

Other factors which can have an influence on the socialization process include the learning environment of a training program, and formal teaching and assessment methods (Cruess et al., 2015). The formal teaching of professionalism is important in

explicitly outlining the norms and standards of a profession for students; however, the educational objective of medical education should go beyond the teaching of professionalism to ensure that students understand the cognitive basis of its principles and internalize its values in order to consistently demonstrate professional behaviours (Cruess et al., 2014). Professionalism must be considered with regards to moral and social development, and the commitment to patient-centric care (Cohen, 2009; Holden et al., 2012). Thus, the CanMEDS role of professional, in conjunction with the remaining six CanMEDS roles–medical expert, communicator, collaborator, leader, health advocate, and scholar–should be viewed as stepping stones to the goal of developing an integrated professional identity.

The formal teaching of both professionalism and professional identity should be grounded in theoretical and pedagogical practices (Irby & Hamstra, 2016; Trede et al., 2012). The assessment of professionalism and PIF have different objectives and require different methods; however, as previously mentioned, the evaluation of professionalism can inform that of PIF (Cruess et al., 2016). Aside from guided, reflective activities (Wald, 2015), Irby & Hamstra also suggest direct instruction, role models, case studies, guided discussion, self-assessment, and moral reasoning tasks to explicitly address PIF in medical training curricula (2016). Some methods which have developed to specifically assess PIF include learning logs, portfolios, interviews, and essays (Kalet, Buckvar-Keltz, Harnik, Monson, Hubbard, Crowe, Song, & Yingling, 2017; Pratt et al., 2006) These have been found to be effective, as they provide a flexible format and require clear,

observable evidence from students, but they also take a lot of time and effort for students to build and educators to assess. Furthermore, without proper structure or guidance from educators, they can be even more difficult to accurately assess, or to distinguish their use for professionalism versus professional identity. Several tools have been designed and validated to assess professional identity, such as the Professional Self-Identity Questionnaire (PSIQ) (Crossley & Vivekanada-Schmidt, 2009). Similar tools have also been developed for nursing and social work. While many of these tools have undergone reliability and validity testing, many are structured around very specific situations related to the professions they are designed for, and fail to address the development of professional identity.

Competency-based medical education

Postgraduate medical education programs are currently in the process of transitioning from a time-based learning model to competency-based medical education (CBME). In a time-based model, students spend a predetermined amount of time in a training program training under the supervision of an expert surgeon in clinical settings (Hodges, 2010). It is assumed that with increased time working under these models, students will gain greater responsibilities and participation, leading to assumed competence at the end of training. Traditionally, medical education has utilized this model of training; however, concerns over patient safety, work hour restrictions, and an increased demand for efficiency have led educators to look for alternative methods for training. The 2015 CanMEDS framework is part of a multi-year competency-by-design

(CBD) initiative to implement CBME models into residency and specialty training programs (Frank et al., 2015).

CBME places less emphasis on the amount of time a student spends within their training program, rather focusing on the performance-based outcomes, or competencies, displayed by students as a marker for progression. A chart outlining some of the differences between a time-based and CBME learning model can be viewed in Appendix D. CBME employs a criterion-based approach to learning, providing concrete, objective performance-based outcomes as the basis for assessment (Holmboe, Sherbino, Long, Swing, & Frank, 2010; Iobst et al., 2010). Time-based models of training typically utilize norm-referenced assessment, comparing an individual's performance to that of another student (Carraccio, Wolfstahl, Englander, Ferentz, & Martin, 2002). CBME also emphasizes frequent, ongoing, formative feedback over the course of a training program as a measure of a student's true abilities (Shute, 2008). Thus, CBME is often considered a learner-centric model of training: students are able to plan their studies based on the predetermined competencies outlined by their program (Sonnadara et al., 2012), and the emphasis on formative assessment allows students to adjust their performance accordingly over the course of training to reach competence (Eva & Regehr, 2008).

It remains unclear the impact this transition to CBME might have on the PIF process. For example, CBME tends to be atomistic in nature, reducing ideas to their core competencies and easily observable traits (Jarvis-Selinger et al., 2012). The question of

how behaviours are internalized–or even how the notion of competence rather than proficiency as an indication of being ready to practice is internalized by students–might be overlooked in this learning model. Similarly, not all CanMEDS roles are equally emphasized in medical education curricula, impacting how students identify with different competencies (Gonsalves & Zaidi, 2016; Kalén, Lachmann, Varttinen, Möller, Bexelius, Ponzer, 2017). Finally, several socializing factors of training programs, such as relationships with role models, feedback and assessment, and clinical participation, might change under CBME: "…the transition to competency-based education can represent a dramatic redefinition of professional identity" (Iobst et al., 2010).

Research questions

This thesis aims to answer two research questions:

1. How do incoming surgical residents understand what it means to be a medical professional, and what experiences have led them to this understanding?
2. How does this understanding change over their first year of postgraduate training?

Despite the depth of literature exploring PIF formation in a medical education context, few studies have looked at professional identity in postgraduate surgical training programs. Residency provides a unique setting for training: students are immersed in a new work environment with new responsibilities, and redefined expectations in regard to their learning obligations, all while navigating the internal and external transition

from medical student to resident. PIF has been suggested as “primary focus of residency” (Sajisevi, Wilken, & Lee, 2016). Furthermore, these training programs are currently in the process of transitioning to a CBME curriculum. As this transition takes place, it remains important to consider the overarching implications of CBME towards the development of medical professionals, and by identifying key factors in training programs that are involved in the PIF process, we can begin to interpret how the new curriculum might impact residents' understanding of what it means to be a medical professional.

Methodology

Participants

Ethics approval was received from the Hamilton Integrated Research Ethics Board (HIREB). Informed consent was received from all participants prior to their participation. Interviews were conducted with incoming surgical residents at the onset of their postgraduate training in July 2018. Twenty-four participants completed interviews in July 2018. Participants were recruited from the annual Surgical Foundations Boot Camp at McMaster University, which included nine different postgraduate training programs. A breakdown of participants’ programs can be seen in Figure 1. The Surgical Foundations Boot Camp was developed in accordance with the Royal College of Physician & Surgeons of Canada’s CBD initiative to help prepare trainees for residency training. Interview questions explored residents’ perceptions of what it means to be a medical professional, what experiences in their training programs

have influenced their understanding of what it means to be a medical professional, and their expectations for themselves as they progress through their postgraduate training and into independent practice. Beginning in January 2019, participants were contacted to complete a follow-up interview to explore how their experiences and immersion in their residency program have influenced their professional identity over their first year of training. Twelve participants completed a follow-up interview. A breakdown of these participants' programs can be seen in Figure 2.

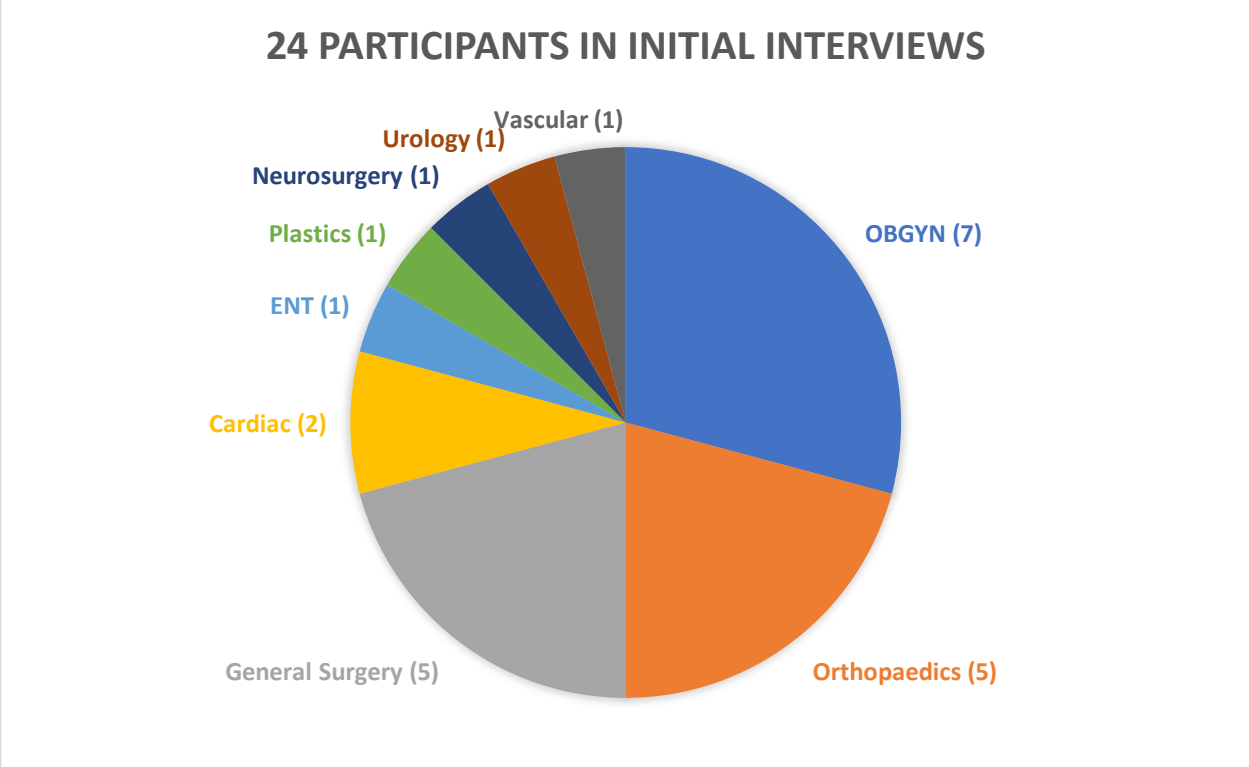

Figure 1: A breakdown of participants' postgraduate training program in initial interviews. A total of twenty-four residents participated in initial interviews. The number of residents from each individual program is listed in brackets next to the name of the program.

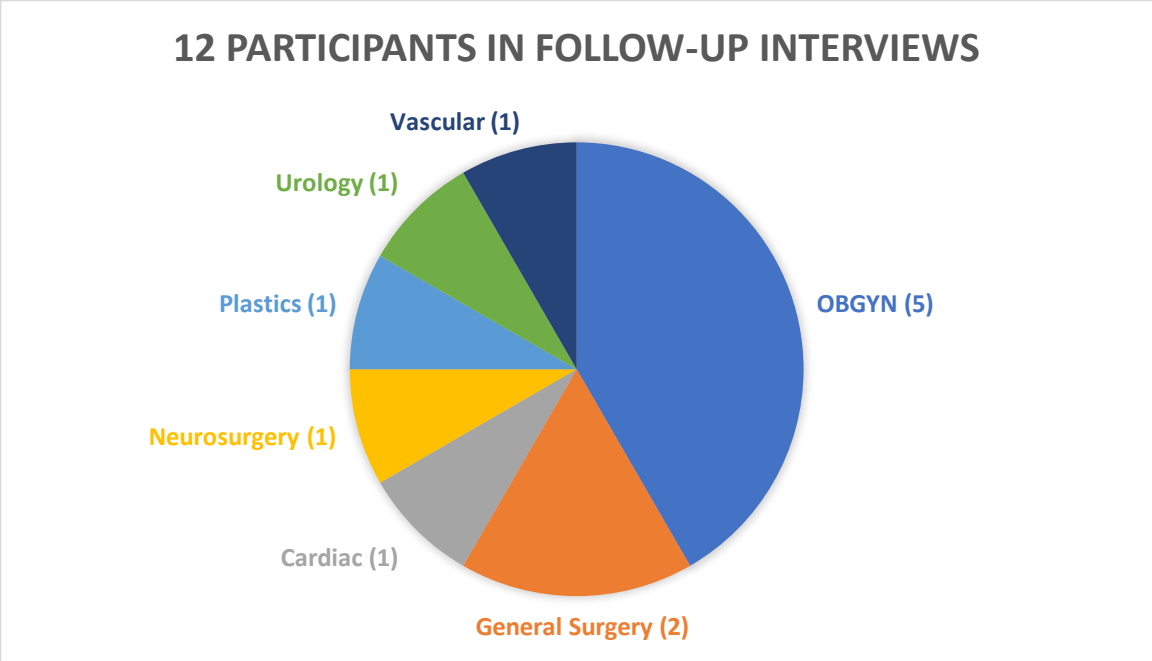

Figure 2: A breakdown of participants' postgraduate training program in follow-up interviews. A total of twelve residents participated in follow-up interviews. The number of residents from each individual program is listed in brackets next to the name of the program.

Materials

Interview questions were designed utilizing current literature on PIF and socialization in a medical education context. One notable influence was Robert Kegan's framework for professional development (1982). Kegan's framework is designed around the work of developmental psychologists; however, it emphasizes development as a continuous lifelong activity that occurs in a variety of professional settings rather than concluding in childhood. Central to the framework is the relationship between the "subject and object"–or one's internal self and their external world–which is constantly shifting between an independent and a collective understanding of their relationship to

their environment. Kegan's framework has previously been adapted to military, dentistry, and medical training contexts to explore PIF of students. Specifically, the use of the framework in a previous study exploring PIF in undergraduate medical students was instrumental to the development of interview questions used in this study (Kalet et al., 2017). Pilot interviews were run to ensure questions were accurately targeting the intended topics. This process also augmented further refinement of interview questions prior to data collection. The final version of the interview script that was used for both the initial and follow-up interviews can be found in Appendix E.

Procedure

All interviews were recorded and transcribed verbatim for data analysis. Thematic analysis was utilized to identify themes in participants' responses (Braun & Clarke, 2006). This analysis strategy functions as an inductive, bottom-up approach, with coding being driven by data rather than research interests or pre-conceived theories. Themes were identified at a semantic level, allowing the explicit language and descriptions found in responses to drive interpretation. Each transcript was coded by two members of the research team to ensure the trustworthiness and accuracy of analysis. The research team met to discuss coding decisions and address individual biases that may exist in any individual analyst.

Results

Initial interviews

Through participants' responses, a central theme of relationships was identified as essential to residents' understanding and formation of their professional identity. This includes their ability to navigate relationships with their patients and the public, their supervisors and other healthcare professionals, their training program, and their own expectations for themselves.

Relationships with patients & the public

Participants noted the unique relationship that exists between surgeons and patients. Their understanding of their profession is built around the privileged position of surgery–the potential life or death implication of one's performance–that is not shared by many other non-healthcare fields. It is the skill and knowledge of the surgeon that directly impacts patient outcomes rather than a pill that is prescribed; surgeons must respect and honour the trust that it takes for a patient to consent to have another person operate upon them. Thus, to pursue a career as a medical professional requires a level of responsibility towards patients, which demands dedication and commitment to one's profession.

> I think of it as a calling, to have such a privileged position, as far as being able to talk to people and examine people and operate on people…like these are things that would be considered, like, totally impossible in any other context.
>
> (Participant P01)

Similarly, this unique relationship with patients extends beyond the healthcare setting. Participants identify the relationship between medical professionals and the

expectations that society holds for them: the public's perception of you as a member of the profession impacts how you are treated and how you must act, regardless of situation. Participants commonly cite the CanMEDS framework to convey the different expectations placed upon medical professionals. The CanMEDS framework provide clearly-outlined roles that can be expected by the public of physicians, developed through extensive patient consultation and input. Specifically, the CanMEDS roles of medical expert, communicator, and professional were identified by participants as vital to their profession.

> To me, it means maintaining the public and professional image that people expect of what surgeons should be like, and maintaining the perception and respect that the population has for these health care professionals. (Participant 05)

> I'm heavily influenced by the CanMEDS roles of what we're supposed to be following, so I think that, ultimately, what my surgeon is supposed to be is, like, a leader, collaborator, scholar, medical expert, all of those things and in near equal parts. Perhaps medical expert at the center. (Participant 04)

Relationships with other healthcare professionals

Participants identified their relationships with their supervisors in medical school as a crucial factor in understanding what is expected of them as medical professionals. The ability to observe their supervisors and model their behaviour–especially when

watching supervisors deal with unique cases or difficult patients–provided participants with a framework to integrate into their own practice. They also noted the perceived importance of independence, trust, and respect in their relationships with supervisors to their development and the formation of their own professional identity; however, the hierarchal nature of training programs can sometimes complicate this relationship.

> Mostly by just observation. I'd say most of what I understood was what I saw in my rotation and tried to emulate that clerkship rotation going on. So, I'd say that there was very minimal directive teaching about concepts, most of what I learned from surgery was from osmosis from people around me. (Participant 04)

> I do want to develop the skills to address any situation that a surgeon would face, and especially in terms of difficult situations, with inter-professional relationships, such as difficult relationships with patients, I want to be able to be comfortable discussing anything like that. (Participant 05)

> If one person, you have a very high power or high status in their hierarchy, could potentially influence the group to become less professional because that's sort of accepted or even thought of as acceptable. And vice versa, if you have someone who is, say, low on the totem pole trying to correct people to be more professional, I think there's a lot of resistance to it (Participant 06)

Peers were mentioned as a means to benchmark one's performance. Through the observation of learners at the same level as them, participants were able to understand where they rank in comparison to their peers, and adjust both their performance and expectations for themselves accordingly. Specifically, participants cited the importance of bad examples, or observing in their peers what not to do, to their own understanding of what it means to be a professional. These examples were described as more salient than examples of outstanding performance, and thus perhaps easier to recall and internalize by participants.

> All of the people that I've seen as terrible surgeons or who I've come to associate in my mind a bad example of the profession because those are the people who really stick with me and those are the people who also serve as reminders. And so those are the ones that, more so than the one of the good example, cautionary tales are more helpful for me. (Participant 14)

Relationships with their training program

Participants believed that they have come to understand what it means to be a professional through the placements, rotations, and opportunities for professional work that they have received through their training program, rather than explicit teaching or learning. Professional identity is viewed as an internal process that cannot always be addressed through didactic learning opportunities and must be developed by the individual; however, as previously stated, they acknowledge that there are certain levels of standards that are expected of their profession which they come to understand

through the observation of role models and service obligations. Participants expect their program to assist this development into a medical professional through clearly laid out expectations, frequent and timely feedback, and mentorship and coaching opportunities. They hope that their program will provide them with work experiences to stimulate continual learning and growth. There is an expectation that they will be able to take on more roles and responsibilities as they progress through their program.

> So I think clear expectations, like, as early and frequently as possible for things that are coming up is a really helpful thing when there's so much going on. (Participant 23)

> I think providing mentors, and even just making sure that they are touching base from time to time is another thing…and I think, like it would be great if some of that was formal, and obviously a lot of that will be informal and covered, like, multiple domains, and not just, like, the clinical side (Participant 01)

Relationships with the self

Participants note the importance of individuality in their professional identity. Professional identity is developed through the internalization of specific factors of their work experiences. Residents mentioned the importance of one's own personal traits in their practice, and they seek out opportunities and relationships that align with the characteristics that they personally value and relate to that of a professional.

> And I also gravitate towards people who are more like me, in terms of that professional image, and who I want to be associated with. (Participant 05)

Participants' goals, expectations, potential conflicts, and fears for their training program were all discussed through the commitment that they made to themselves. Among these concerns were the ability to have a personal life outside of their training program, to have enough time to take on all the opportunities that they wish to pursue to benefit their development, and to maintain the personal characteristics and resiliency that they value at the beginning of their training. Participants had self-admittedly high expectations for themselves at the onset of their training. They expect that their training program will support their personal goals and support their personal development as they progress through residency.

> I would say, I expect that over the next five years, I'm not going to have personal life and I'm not going to be able do stuff as much other than my residency training and doing some research if I can fit it in. (Participant 07)

> Like for me, I sacrificed a lot to be here so, not being able to achieve something positive out of it…So for now, if I don't succeed, or if I don't live to my own expectations, I would be very disappointed and I won't let that happen. (Participant 02)

> I know a little bit about the support system because they gave us talks about them and know by the number of emails and stuff. If one day, I need to speak to someone, I know exactly where to go. (Participant 12)

Follow-up interviews

Similar to initial interviews, participants cited their relationships with their patients, other healthcare professionals, and their training program as influential to their understanding of what it means to be a medical professional; however, less emphasis was placed on the relationship with the general public and the expectations one places upon themselves.

Relationships with patients

Participants' understanding of what it means to be a professional was centered around the role of patient care. Non-technical skills such as communication and medical knowledge, as well as procedural and technical abilities that were associated with participants' definition of a medical professional were all discussed through their specific application to patient care.

> [Being a medical professional] is providing medical care to patients to the best of…what we're able to provide in terms of evidence-based care and resources, and doing that in a way that is humane and compassionate towards patients. (Participant 05)

> I think communication is probably the biggest one because you have to be able to explain your reasoning. You have to be able to inform patients of their health status. And you need to inform them of treatments and interventions adequately. (Participant 07)

> I think I would answer that one by saying providing the best possible care to patients while also working collaboratively with other specialties to make sure that everyone comes together to really provide that patient centered-care. (Participant 08)

Participants noted the important role of patient encounters to their learning of what it means to be a professional. Participants feel more responsible for their patients than they did as medical students, building personal, trusting relationships with patients in order to provide proper care. These personal relationships drive their own goals and expectations as they progress through their program and into eventual independent practice.

> Just by the nature of gaining more responsibility as a resident, just because it becomes more true to your everyday life when you are addressing patients as a physician now, rather than a medical student, it holds a little bit more weight… I think that you live it out more in your day to day life now, that it holds more true, like if you make a mistake, for example, on ordering the wrong medication or something goes wrong in the OR, you kind of feel more personal responsibility

> to informing a patient that something happened and you feel more personal weight of the ramifications that mistakes could possibly have. (Participant 16)

> I think the worst consequence is you just do a disservice to the patients. I think there is so much ample opportunity to benefit patient care that I don't think I have experienced anywhere else in the world… But, the worst consequence for me is that granted all these opportunities, and I think it's actually the worst fear shared by all the residents, despite all the opportunities that you have that you don't make the most benefit of it and then inadvertently the patients you treat are affected. (Participant 11)

Relationships with other healthcare professionals

Participants noted the importance of working in a team with other health-care professionals and developing interprofessional skills to their understanding of what it means to be a professional. The team-based work environment allows residents to gain a greater appreciation of all of the different roles and responsibilities required for proper patient care. Furthermore, understanding the multi-faceted nature of patient care helps them integrate their different skills–and value the need to integrate these skills–into a holistic professional identity.

> I am setting a higher standard for what I need to know and what my skill level needs to be, and how I interact with not only patients but other health care professionals, so nursing, physiotherapists, and everyone else in the health care

> team. Because I didn't realize beforehand, but that is probably one of the most important things in working in health care is how you work with your colleagues. Because that really impacts the patient's outcome. (Participant 14)

> Doing your due diligence with kind of your role in the team I think is a big part. So, taking ownership of kind of the leadership role is a big part of being a doctor and being professional is seeing that the job is adequately done. So, whatever needs to be done to enable that, I guess. (Participant 10)

Participants cited the importance of mentorship and working with their supervisors to help them understand what is expected of them from their program and how they should act in specific situations. They hope to build strong, personal relationships with their supervisors, sharing experiences and relating to one another on an individual basis. This not only allows for the creation of a support system to help residents get through any difficult situations that they encounter in their training program–and to feel comfortable asking for this help–but to also help them gain an understanding of how established members of their profession identify with their role.

> More directly however, I think our supervisors have been very helpful in guiding us into our expectations for each year of residency. So, for instance, like the supervisors, I work very closely with a lot of the supervisors on my service, and a lot of them have different ways of doing things but they will also let you know

> that since you have, since you are a first year, this is the skill set that we expect from you and this is why. That's a more direct guidance. (Participant 11)

> I've been able to find mentorship through informal relationships, and I think they definitely have influenced my idea of what it means to be a professional through seeing what they're really like, once you get to know them a little and they don't need to have their guard up anymore. (Participant 20)

> I think really what's emphasized in my program is that the closer you have a mentor, like it works on a mentorship mentee process. I think the closer you are with staff, even if they share things in their personal lives and stuff like that that may be impacting their work, I think you build a very strong bond with them. (Participant 11)

However, participants acknowledge the hierarchy that exists in medical education. It is not always easy to form personal relationships with supervisors due to the inherent role of assessment that exists in the training program. This can impact how comfortable and open they are when working with staff, and thus their ability to relate to them on a personal level. While variability may exist depending on personality traits, participants typically feel more comfortable when working under the supervision of senior residents. Senior residents can often better relate to the experiences of more junior residents due to having gone through similar experiences in their training more recently than staff.

> I think you generally feel more comfortable with senior residents…if an interaction with a patient doesn't go very well, for example, you might, with a senior resident, be more able to question, you know, 'why do you think that went wrong? Do you think that we did something inappropriate?" whereas if you're with a staff and you do that, you're kind of…you're less willing to question their actions. (Participant 16)

> I think we're still careful about maybe asking dumb questions or seeming that we're not up to par…I think it's easy to really see how staff can forget what it was like being a resident, and I think it shows a lot of times because, um, they kind of forget how much we don't know at this point, and it's easy for them to not see that, and I find that apparent when I talk to some staff a lot of times. (Participant 05)

Similarly, participants value the support that they receive through their peers. This can be seen through the relationships and conversations residents have with one other, and the ability to recognize and build off of each other's mistakes. Peers provide a safe environment to help navigate their experiences within their program, re-evaluate expectations for the self, and understand how one's professional aspirations align with those of other residents.

> I actually hold those relationships [with peers] quite highly as a way to, you know, maybe vent a little bit my frustrations at times or gain some insight from

> my peers on stuff like 'how do you think I could've done better in this situation?' It's just very comraderial when you're chatting with people who are at the same professional level as you. (Participant 16)

> I think I expect to make many mistakes along the way but hopefully have good support systems in terms of peers and staff to help guide me through the transition as I go from residence to staff. (Participant 09)

Relationships with their training program

Participants did not feel that their expectations for themselves in their program had drastically changed throughout residency; however, they acknowledged that they are much more realistic regarding what they are able to achieve. They recognize the time constraints and volume of work that have impacted the goals that they set for themselves and how they are able to engage in activities that they perceive as vital to their professional development.

> I don't know if there has been any major conflict in my expectations. I think starting residency there was probably, like in the first couple months, there was a much bigger learning curve in terms of the amount of responsibility that I was expecting was going to be put on me. (Participant 08)

> I think when you start training, and I might still be in this stage, but you're more of a romantic. But when you see what it's like to be in practice the more time

> you spend in the field, your expectations become clearer and then you sort of evolve to have sort of more realistic goals, I think. (Participant 07)

Participants noted the difficulties that these time constraints can create in building relationships with patients. While they value the ability to build personal relationships with patients in order to provide proper care, it can be challenging given the sheer volume of patients that they work with on a daily basis. Furthermore, when working as a member of a team, different individuals might have different levels of engagement with patients. Internal conflicts can arise when these differences impact how a resident is able to provide patient care, or interact with other healthcare professionals. Developing a holistic professional identity requires residents to balance their relationships and obligations to both their profession and their patients.

> I think my patients and family probably expect me to be able to provide more in terms of how…the time I can spend explaining things, the time I can spend talking them through what's going on, but then we will have clinics where we need to see eighty patients in six hours and it's you basically alone in a clinic, and so you don't have time to, and so you do the best that you can, and you sort of lower your expectations of yourself to be able to get through things as quickly as you can. (Participant 17)

> I'll see a patient and I'll want to communicate something effectively to my team about that patient but the agenda of that patient and the staff physician, for

> example, can be different. So, conflicts come up that way where I am trying to advocate on behalf of a patient but then that team cannot support that need for whatever reason…And that creates a little bit of conflict I think with patients just because they trusted that you were going to do what it seems like you wanted to do, but then you come back with this weird other message. (Participant 10)

Participants value the role of their work experiences within their training program, specifically working with patients, in developing a professional identity; however, due to time constraints within their training, it is not always easy to identify the value of these experiences. There is limited formal learning, or even reflection on the learning that has occurred through service. Service is seen as taking precedence over learning. Thus, mistakes can be seen as solely detrimental to patient care rather than as a potential teaching opportunity, and residents must learn to balance the relationship between their role as a learner versus their service obligations.

> Well there are certainly some rotations where we are asked to do so much and be responsible for so many patients that just getting through that takes away my ability to go home and learn more things. Or we are working such long hours it is not really possible to go home and teach yourself some more things. (Participant 01)

There is also a balance that exists within an individual's relationship with their supervisors. Residents value the mentorship and learning opportunities that come through working with staff, but also desire a certain level of autonomy to develop their

own independent thoughts and practices. Moreover, an inability to feel comfortable when working with supervisors and the fear of making potential mistakes might challenge the opportunities that residents are willing or able to pursue. They believe that autonomy is explicitly built into their program through the amount of responsibility that they gain as they progress through their training, but this autonomy is only possible through the trust of their program and supervisors. There is an expectation that their program will assist them in their development by acknowledging the level of the learner, stressing continual growth, and preparing them for independent practice.

> I'm starting to form my own thoughts through my own experience that I don't always agree with supervisors, but it's not something that I necessarily put out, but it's slowly starting to build inside in terms of my own experience. (Participant 05)

> Trying to improve the level of care that you provide every chance you can is something that is of the paramount importance. I think one of the things that we try to do is to improve our performance after providing capabilities. (Participant 24)

> I think classically with having some…exams and mentors and people seeing you operate, people are always making sure that someone is safe to operate when they graduate or that they are able to be a physician and be certified by the

> Royal College…I mean that's the main priority of the residency program, to see that someone has spent and that they have acquired the knowledge necessary, so I fully trust the program, that by the end of it, I have been appropriately assessed to either have the skills or not to be a general surgeon independently. (Participant 05)

Discussion

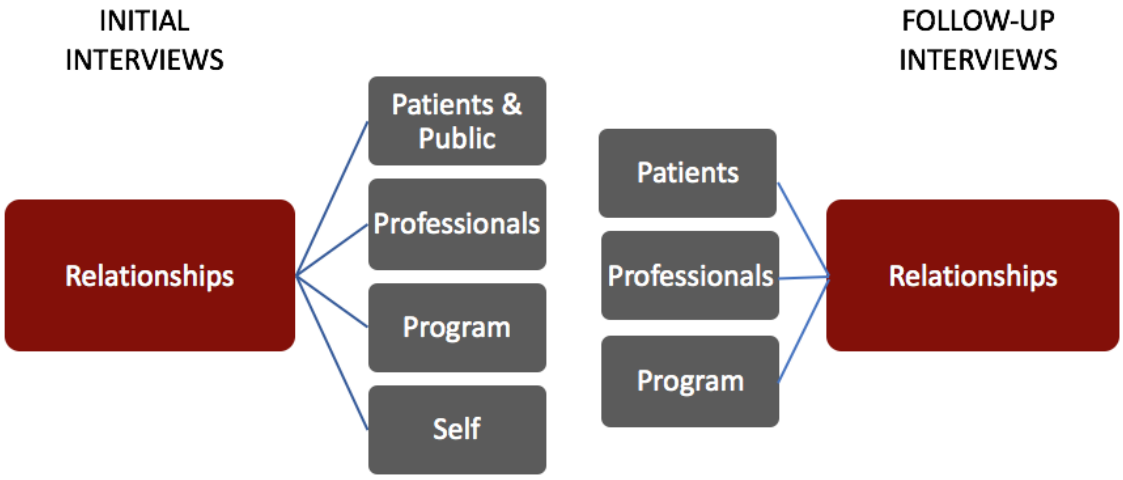

Figure 3: A comparison of themes extracted from both rounds of participant interviews.

In initial interviews, participants' responses regarding what it means to be a medical professional centered on their relationships with patients and the public, their supervisors and other healthcare professionals, their specific training program, and their own expectations, values, and beliefs. Follow-up responses revealed a similar focus on relationships with patients, other healthcare professionals, and one's training program;

however, less emphasis was placed on the influence of the public and one's own personal expectations as they progress through their training.

Professional identity can be defined as the internalized values of a profession as a representation of the self (Cruess et al., 2014). Although it happens at an individual level–rooted in the psychological development and maturation of the person–it is ultimately driven by a number of social factors (Jarvis-Selinger et al., 2012). Roles are placed upon residents by their patients, profession, the public, etc. and the internal consolidation of these experiences and expectations help them understand who they are as a medical professional. As stated by Jarvis-Selinger et al.:

> The powerful confluence of external influences, social agents, and role shifts provides opportunities for crises that are the necessary precursors to identity development. As such, "immersion" in the clinical environment is paramount to the process of socialization and to understanding how competence and identity emerge as complementary processes of becoming a physician. (2012)

The differences in participants' responses between their initial and follow-up interviews provide examples of not only how residents' understanding of their professional identity has formed over their first six months of postgraduate training, but also the key socializing factors that influence the PIF process. The following sections will highlight specific changes in participants' responses between the two sets of interviews, as well as explore how professional identity might continue to change in residents as they progress through their training programs.

Changes over the course of interviews

Patient-centric care

Perhaps the biggest change in participants' responses over their first six months of training is the role that patient care plays in their understanding of what it means to be a medical professional. Although participants acknowledged the relationship with patients in their initial responses, follow-up interviews prioritized patient care as the central focus of one's professional identity. All previous discussion of personal goals, expectations, and development were contextualized in follow-up interviews within the framework of how they related to patients: rather than viewing their profession through the commitment they made to themselves as residents, participants adopted the perspective of how their commitment to their profession impacts the well-being of others.

> But I don't want to fail the expectations of my patients because I think that's the number one part of the job…they have pretty minimal expectations to be honest in general. And if we can't rise to that then it's pretty disappointing. (Participant 10)

Furthermore, when discussing patients, participants discussed them as an active contributor of providing their own care. Each patient needs to be involved in the healthcare process, and participants stressed the importance of connecting and communicating with patients on a personal level to allow for a trusting relationship that allows this to happen. Moreover, they felt an increased amount of responsibility in each

individual patient encounter. In initial interviews, participants discussed the importance of professional identity due to the expectations placed upon healthcare by the general public; however, follow-up interviews abandoned this view in favor of prioritizing individual cases.

These results suggest a transition to a more humanistic view of medicine, perhaps initiated by the newfound weight of responsibility felt by participants towards their patients (Cohen, 2007). Patients are not discussed as a distant, vaguely-defined concept, but rather as individual human beings with specific goals, expectations, and insights into their own care that must be involved, engaged, and considered as a healthcare professional. Rejected is the Foucauldian concept of the 'medical gaze': the physician-centric view of healthcare that has the potential to separate the patient's physical condition with the dynamic nature of their personal identity (Misselbrook, 2013).

Holistic professional identity

Follow-up interviews revealed the importance in participants of developing a holistic professional identity. While participants still associate their understanding of what it means to be a professional with a number of skills–communication skills, medical knowledge, technical abilities, etc.–they discuss these concepts in relation to the encompassing concept of patient care. Skills are not viewed as isolated traits that must be obtained in order to succeed on an individual level, but rather integrated factors that contribute to the complete goal of helping others. Similarly, when discussing

expectations for patient care, highly specialized and specific goals and examples are replaced by the general-yet-complete notion of service. Kegan describes this as the beginning of developing a "fully integrated moral self" (1982) who has internalized and consistently applies professional values. This self is able to understand the role of the individual in the 'big picture' of healthcare, and is able to critically appraise and apply professional values within a variety of different settings (Trede et al., 2012).

For example, a professional must be prepared to work with patients in a variety of different situations. In both sets of interviews, participants cite the importance of viewing supervisors working in difficult situations, such as with challenging patients or unique cases, as important to their own understanding of what it means to be a professional. This focus on unique situations in initial interviews can be thought of as a precursor to the desire to develop a holistic professional identity that is prepared for all situations that is seen in follow-up interview responses. On a surface level, these unique cases might not fit into a teaching paradigm, and their infrequent occurrence might not be viewed as an integral piece of one's profession; however, participants recognize patient-care as a top priority, and an inability to internalize and immediately relate to these situations can lead to negative patient outcomes (Hafferty, 2009). The acknowledged importance of cases which might not always occur or hold relevance on a daily basis displays the recognition towards a well-rounded and prepared surgeon.

> The biggest thing lacking from myself now and myself as a future full-fledged physician is really the medical knowledge and being able to integrate all these

> guidelines and care for individualized patients, and that would absolutely be my priority. (Participant 05)

In initial interview responses, one prominent framework used by participants to encompass all of the different skills required of physicians was the seven different CanMEDS roles. Specifically, the roles medical expert, professional, and communicator were explicitly identified as vital to one's professional identity, whereas collaborator, leader, health advocate, and scholar went largely unmentioned. When considering why these roles went unmentioned–aside from the potential that these three roles are truly the only traits internalized by incoming postgraduate surgical residents–it could be due to the lack of focus, and thus familiarization, on these roles in undergraduate medical training programs (Gonsalves & Zaidi, 2016; Kalén et al., 2017). In follow-up interviews, the use of the CanMEDS framework was not used by participants to illustrate the need for a holistic professional identity; however, all seven roles were discussed in regard to the different expectations participants held for themselves as they progressed through their training program.

> Yeah, I think when I first answered it, I was like very CanMEDS roles, and now I really feel like it's like trying to truly understand your part of the bigger job and making sure that its done and that everyone else is doing their part as well. So now I think that it is more like really seeing what is needed like a holistic picture of what's needed for patients and then making sure that that's done. That's what I would want a professional doctor to do for me. (Participant 10)

Relationships with other healthcare professionals

Follow-up interviews also placed a greater emphasis on the relationships built with other healthcare professionals. Rather than viewing supervisors or peers as a means of observing what it means to be a professional or a standard to compare one's own performance, respectively, participants instead discussed the importance of forming active, reciprocal, personal relationships with other surgeons, and equally with other healthcare professionals that are involved in patient care. These relationships not only provide residents with a greater appreciation of all of the roles and responsibilities that are required for optimal patient outcomes, but also allow them to gain an understanding of the professional values of 'experts' in their field. The ability to converse, share, and relate to other professionals on an individual basis provides insight into how supervisors and peers identify as professionals. Furthermore, it can stimulate participation in work activities through increased trust from other healthcare professionals that are comfortable with working with a specific resident (Lave & Wegner, 1991).

> I think the closer you are with staff, even if they share things in their personal lives and stuff like that that may be impacting their work, I think you build a very strong bond with them. And they are able to direct you in life… And I think it makes you a better surgeon in the end because you know you have support at work. They let you know what the expectations are to building a successful

> program and when you have like a family structure like that, like a very cohesive network, you feel like you're part of something bigger. (Participant 11)

Participants commonly cited the importance of negative examples–i.e. observing bad examples of being a professional–as integral to their own understanding of their professional identity. These negative examples might be more salient, or easy to remember, than positive examples of medical professionals due to their stark contrast to existing notions of the concept (Baumeister, Bratsalvsky, Finkenauer, & Vohs, 2001); however, they could also represent the continually emerging concept of a holistic professional identity. Negative examples might further complete the picture of what it means to be a medical professional by providing concrete observations of what does not fit within the role (Jenkins, 2008; Monrouxe, 2009) and one's immersion into a clinical environment can provide insight into what it means to be a professional that cannot be as easily learned or addressed in a traditional classroom environment (Hodges, 2010). Further, these negative examples may play a crucial role in a residents' relationships with other healthcare professionals. As an incoming resident, seeing the negative performance of supervisors and peers might help instill confidence and a sense of belonging: even those established in a field can struggle with aspects of their role. Witnessing the limitations and imperfections of one's profession can significantly impact one's professional identity and help students transition to a more grounded view of their expectations (Cohen et al., 2009). Thus, these shortcomings can serve as a means to stimulate one's personal growth, to learn and relate to their colleagues on an

individual basis, and, consequently, can play a crucial role in becoming a member in an established community of practice (Jarvis-Selinger et al., 2012; Wenger, 1999). Despite the potential learning value of these observations, it is important for training programs to consider exactly how these examples are internalized by residents to ensure negative behaviours and understandings are not integrated into practice (Cruess et al., 2015; Mann et al., 2009). Moreover, training programs must question to what extent these negative examples are prevalent when improper care can have major implications on the well-being of patients.

Role of the self

In initial interviews, participants placed great importance on the commitment that they made to themselves by pursuing a career as a medical professional: the anticipated struggles of maintaining a personal life throughout residency, professional goals rooted in personal expectations for the self, and the hope that their training program will support these goals as they progress towards independent practice. In follow-up interviews, less stress was placed on one's own personal navigation through their residency program, and rather how one's personal life can impact patient care.

> I hate to say it because I don't want to feel like I'm-feel indebted to the profession-or what not. But I guess I'm starting to and it would just, you know, sort of be embarrassing not to live up to their expectations. And probably it would hit me especially hard which is kind of a surprising thing. You know normally I don't normally think I would think that. Um, I feel most responsible to

> myself and to family and stuff, but I guess as time moves on the profession takes a larger role in my life. (Participant 07)

Despite this redefined obligation to their profession and patients, the self still plays a significant role in one's professional identity. Participants suggest the need to integrate their own personal life in their professional role. Due to the time constraints and high volume of service obligations that exist, residents must be willing to sacrifice their personal time in order to learn and reflect on their experiences within their training program. Moreover, the ability to relate with other professionals on a personal basis can lead to participation, and ultimately increased learning opportunities, in a team-based learning environment (Lave & Wenger, 1991; Wenger, 1999). With this in mind, one's success in their program can be viewed through their ability to 'blur the line', so to speak, between their personal and professional identity. PIF must be viewed within the overall identity formation process (Holden et al., 2012); although it is driven by external socializing factors, how an individual internalizes these factors and understands their relationship with their experiences cannot be ignored.

Robert Kegan's framework

Referring back to Robert Kegan's framework for professional development (Appendix A), "meaning-making" is portrayed as the balance that exists between subject and object–or the internal self and external world–which is constantly in tension between an inclusive, collective, integrated identity and one that is independent and distinct from the other (1982). It can be argued that, at the onset of their postgraduate

training, residents' interview responses revealed an independent understanding of their professional identity. Through Kegan's framework, this commitment to one's self can be understood in respect to the uncertainties one may have towards their role and expectations in their new training program. In order to meet these expectations and succeed in their program, residents commit to this individualistic view of themselves as professionals, willing to use any available resources in order to achieve their goals. Kegan describes this as the imperial stage of professional development.

Follow-up interviews possessed a more collective view of the self, seen through the emphasis on patient-care and relationships with other healthcare professionals. Kegan describes this as the interpersonal stage of professional development: residents recognize that success as a healthcare professional is not defined through individual goals but rather the team-based work environment and positive patient outcomes. Furthermore, an inability to work in this team-based environment can impede one's success or progression in their training program. Mechanisms such as mentorship and participation help residents understand and internalize the ideals of their profession.

<u>How might professional identity continue to change throughout training?</u>

The institutional self

It will be interesting to see how participants' professional identity continues to develop throughout their first year of postgraduate training. Given the constant shift between an independent and inclusive identity depicted in Kegan's framework, this suggests that residents will again adopt a more independent view as they continue

through training. For example, residents already acknowledge the time and volume constraints that can challenge their ability to form meaningful relationships with patients. Furthermore, as residents take on different roles and increased responsibility as they physically progress through training, it may be increasingly difficult to connect with a multitude of other healthcare professionals on a personal basis, or engage with the ideals of multiple different groups. Thus, Kegan's framework suggests that residents cope with these challenges by focusing on the development of the individual self to separate their participation in multiple different groups and have a clear understanding of their own personal role in a team-based work environment. Kegan refers to this stage as the institutional self.

Implications of the institutional self

In the institutional self, the subject, or internal self, is their personal autonomy and independence (Kegan, 1982). Focusing on this individualistic view instead of group ideals, one is able to balance the potentially conflicting responsibilities that they feel between different groups. Perhaps this need for one's professional identity to transition back to a more independent view of the self is already acknowledged in the responses of the follow-up interviews. Participants noted the difficulties that can arise when patients' hopes and plans do not align with that of the extended healthcare team: the resident must be able to navigate these types of conversations with both groups. The institutional self is able to prioritize independent values in order to deal with the stress and conflict that might arise from these difficult situations.

Burnout is defined as "a state of mental and physical exhaustion related to work or care-giving activities" (IsHak, Nikravesh, Lederer, Perry, Ogunyemi, & Bernstein, 2013) and is typically characterized by feelings of both physical and emotional exhaustion, cynicism, a lack of empathy or depersonalization, lethargy, and a drop in productivity (Falkum, 2000). Organizational factors such as poorly defined responsibilities, ambiguous roles, difficult scheduling, and work overload have all been identified as contributors to high percentage of burnout seen in healthcare professionals (Schaufeli, Leiter, & Maslach, 2008). A strong sense of professional identity and self-esteem have been noted as significant factors in reducing feelings of burnout in medical professionals (Schaufeli et al., 2008). Thus, this redefined commitment to one's self might play a crucial role in self-care, a key concept highlighted by the CanMEDS framework related to professional identity. As these situations become more frequent as residents continue through their training–and as residents potentially hold more weight in making difficult decisions as they become more senior and take on more leadership roles–they have the potential to challenge the principles and obligations they value as a medical professional.

For example, how might this impact residents' relationships with patients? One common phenomenon seen in healthcare professionals is the perceived loss of empathy over the course of training and into independent practice (Newton, Barber, Clardy, Cleveland, O'Sullivan, 2008). Empathy can be defined as "as the capacity to take the perspectives of others, to be sensitive to their inner experience and to engage with

them compassionately" (Haslam, 2007), rather than feeling compassion for the experiences of others (Cohen et al., 2009; Haslam, 2007). This occurrence can be viewed as a direct response to the challenges of balancing of the ideals of multiple different groups. Given the increased responsibilities and volume of work required of residents as they progress through their training program, it can become exceedingly strenuous to develop a meaningful relationship with each individual patient (Cohen et al., 2009). This additional stress placed upon residents can have negative consequences both towards patient outcomes and self-care. As stated in a 2001 paper, "thus, young medical professionals become convinced that the most effective way to show compassion for a patient is to take a clinically detached approach" (Coulehan & Williams). A well-defined, independent professional identity can be seen as an attempt to optimize efficiency and surgical performance; however, it remains important to consider how this detached approach might actually impact patient care. Kegan notes that loneliness, stagnancy, and a loss of purpose are all common feelings of the institutional self (1982), which can further impact how one is able to relate to the experiences of patients. Patient care, and one's dedication to patient care, should remain the top priority for medical professionals (Cohen et al., 2009; Holden et al., 2016; Monrouxe, 2009) and medical education must aim to support the moral development of residents and not conflate self-interest with patient interest (Coulehan & Williams, 2001). Literature on PIF in medical education notes that it is difficult for individuals within training programs to extend beyond the institutional self (Cruess et al., 2014); thus, it is important to

understand the implications of the transition to the institutional self on the well-being of both residents and patients.

Role of reflection

Reflection can play a major role in residents' ability to transition from the institutional self to the interindividual self–the final stage of Kegan's framework–and should be emphasized through postgraduate training. Explicit reflective activities can help a learner understand how the new knowledge and experiences provided through their training program align with their personal beliefs and values (Cruess et al., 2015; Mann et al., 2009); however, participants question the extent to which reflection is emphasized with their training programs. Participants noted that service obligations often take precedent over explicit learning and teaching sessions, and the constant volume of work leaves little to no time to actively reflect on one's personal learning and performance. There is also an inherent trust in one's training program, that they will be provided all the necessary exposure and participation in different procedures and opportunities to be prepared for independent practice at the completion of training. Does this trust in training programs underemphasize the importance of being reflective in one's own practice? Furthermore, when the majority of reflection occurs outside of one's training–i.e. during one's personal time–what effect does it have on trainee's ability to accurate assess their own performance, knowing the limitations of self-assessment (Eva & Regehr, 2005)? CanMEDS identifies self-awareness and appropriate practice as enabling competencies under the concept of professional identity.

Considering the tangible goal of medical training programs is to prepare students for autonomous practice, the ability to independently recognize and understand their values as a professional can have significant implications on patient outcomes. Kegan notes that deep reflection on the "constraints of autonomy" is necessary to combat feelings of loneliness, stagnancy, and loss of purpose in the institutional self (1982). Thus, it is through reflection that an individual is able to progress to the interindividual self and commit to the ideals of different groups while preserving personal form.

Transition to competency-based medical education

As previously stated, postgraduate medical education programs are currently in the process of transitioning to a CBME framework. As programs continue to adopt this education model, it will be increasingly important to understand the overarching implications of this transition on the development of medical professionals. While interview questions did not address the transition to CBME explicitly, certain themes from participants' responses may be challenged in this new educational framework.

CBME emphasizes formative assessment that is frequent and ongoing over the course of a training program (Shute, 2008). The utilization of multiple different assessments over a course of study can provide a more accurate representation of a resident's true ability, with their success and progression through their training program being founded on their exhibition of different performance-based outcomes, or competencies. Formative assessment requires increased faculty and program involvement in training due to an increased need for direct observation and the

frequency of observations for this multitude of assessments (Carraccio et al., 2002). Assessments are structured around the use of entrustable professional activities (EPAs). EPAs are defined as tasks or responsibilities that can be entrusted to a trainee once sufficient, specific competence is reached to allow for unsupervised execution (ten Cate, 2013). Participants noted the importance of having the trust of supervisors to their professional growth, and trust can have a major impact on one's ability to participate in their community of practice (Wenger, 1999). It remains important to consider not only the trust that programs and supervisors place upon students, but equally the confidence they have in themselves, and their comfort when working both with supervisors and independently.

In interviews, participants noted the importance of their relationships with supervisors to their understanding of what it means to be a professional, specifically when they are able to relate to one another on a personal level. Although the hierarchal nature of medical education is already acknowledged by participants in their responses, this increased emphasis on assessment seen in CBME has the ability to further complicate residents' relationships with supervisors. The possibility of receiving a negative evaluation might make a learner more hesitant to work closely and reveal vulnerabilities–or "let their guard down", as quoted in interviews–around supervisors. Furthermore, the increased time and effort required of supervisors to provide frequent formative assessments could potentially redirect time previously committed to fostering personal relationships with residents. Participants also mentioned the importance of

working through difficult and unique cases to their development of a professional identity that is prepared for all possible situations. Will residents continue to engage in these unfamiliar opportunities if they might lead to more negative evaluations?

There is also the question of how CBME might redefine the types of experiences that residents consider valuable to their professional development. In interviews, relationships with healthcare professionals and peers, and observing and understanding their professional values, was cited as important to understanding what it means to be a medical professional. CBME tends to emphasize a criterion-based model of learning rather than norm-referenced, formatting assessment around pre-determined competencies rather than one's performance in comparison to another student (Carraccio et al., 2002). Will residents turn to these competencies as the markers to guide the formation of their professional identity? Further, what will residents pay attention to as valuable learning opportunities: will strictly the formal assessment and feedback of one's own performance serve as the main marker for progression through their training program, or will the observed assessment of one's peers be equally valued? In emphasizing performance on predetermined competencies instead of time, CBME may miss teaching and evaluating many of the essential skills needed for clinical practice (Sonnadara et al., 2014).

CBME has been criticized due to its relative focus on easily observable outcomes and behaviours (Jarvis-Selinger et al., 2012). It remains unseen how PIF, or the internalization of the values of one's profession, can truly be built into a CBME

curriculum. If the goal of medical training programs is to support students as they develop a holistic professional identity, CBME might be considered atomistic in nature through its focus on observable outcomes (Jarvis-Selinger et al., 2012). Kegan acknowledges the formation of a fully integrated moral self as the goal of professional development (1982). The fully integrated moral self is able to incorporate a number of different skills into a single professional identity that is consistently applied in a number of different contexts. This greater appreciation for being a well-rounded medical professional was not explicitly addressed by participants until the follow-up interviews. If participants' experiences in their training program have influenced this transition in understanding, we must consider whether the same change would be witnessed in the new training framework. Even without focusing on professional identity itself, the notion of 'competence' as a marker for progression through one's training program might be internalized very differently than 'proficiency' or 'excellence' (Jarvis-Selinger et al., 2012). In interviews, participants self-admittedly held themselves to very high standards for their progression as medical professionals. Setting the standard for progression as 'competent' could deprive the program of encouraging the same expectation for excellence in future residents. The language used within training programs can have a significant impact on the socialization of students (Ginsburg & Lingard, 2011). On the opposite end of the spectrum, it is important to consider what it means to residents to receive a negative formal evaluation, both in terms of how it might impact their progression through a program–and participate in activities that they

deem valuable to their professional development–as well as how it is internalized and integrated into their perception of themselves as medical professionals.

Regardless of whether students train in a time-spent or CBME training model, there is an inherent trust in one's training program to prepare them for independent practice, and provide them with the necessary experiences in order to succeed as a professional. CBME is considered a learner-driven education model: there is increased transparency and flexibility towards students to progress through their program based on their individual skillsets (Sonnadara et al., 2012). Participants already acknowledged their own role in their development of their professional identity; however, the responsibility lies on medical training programs to prepare students for their career. The internal nature of professional identity formation can potentially discourage its inclusion in medical education curriculum; even in interviews, participants acknowledged a certain level of individuality in the process that deter its emphasis in explicit teaching or learning sessions. Nonetheless, it remains important to consider the implications of formal training curricula–and specifically CBME as it becomes more prominent in postgraduate medical education–to students overall understanding of what it means to be a medical professional (Cruess et al., 2016). PIF should be considered an essential component of CBME (Holden, 2012, Wald et al., 2015). As explained by Jarvis-Selinger et al.:

> Our intention is not to replace competency-based approaches in medical training but, instead, to add a new dimension to the discourse and work of training the

> next generation of physicians. Including identity alongside competency allows us to reframe our inquiries toward questions that include a focus on being rather than exclusively a focus on doing. (2012)

Limitations

One single institution

All participants in this study were recruited from a single postsecondary institution. Furthermore, participants came from nine different training programs within this single institution. PIF can be specific to the context of an individual training program, with factors such as role models, mentors, and the actual physical location of the program having an impact on the socialization process (Cruess et al., 2015). Further research is required to understand the PIF process across different institutions or within a single training program.

Personal socializing factors

Interview questions specifically explored factors and experiences within medical training programs that have influenced participants' understanding of what it means to be a medical professional. One's personal life outside of their training program will also influence their professional identity. Factors such as family, friends, culture, etc. all impact students' values and beliefs regarding what it means to be a professional, as well as how they experience their training program. The results of this study do not suggest that these factors do not play a role in the PIF process, but rather attempted to focus on a specific subset of curricular elements that impact the process.

Role as a resident

PIF is a continuous, lifelong process. This thesis explored residents' perceptions of what it means to be a medical professional and their own professional identity. As participants continue through their training program and into eventual independent practice, their experiences will continue to influence their professional identity. While interview questions explored residents' current and future expectations for themselves–both as a trainee and full-fledged health professional–professional identity must be considered within an individual's specific context. An incoming surgical resident is not only in the process of learning what it means to be a surgeon, but what it means to be a resident as well. It can be difficult to divide these two concepts due to the notion that independent practice can be seen as a goal of training programs, and thus influences the actions and learning of individuals within the program.

Similarly, although it can be theorized that residents six months into their postgraduate training align with the interpersonal self, as described by Robert Kegan's framework (1982), this does not necessarily mean that this stage will provide the baseline as participants progress through their careers. Kegan's framework suggests that, upon entrance into a new role or level of profession, an individual must learn what it means to be a member of that specific role or level. Even as an independent, fully-fledged surgeon, it is possible for an individual to enter practice identifying with the imperial self, prioritizing their individual needs over that of other healthcare professionals and patients. It remains important to consider the longitudinal PIF of

healthcare professionals as they continue through their career path, and specifically the impact of explicit transition points in their training and practice.

Conclusion

The research questions guiding this thesis were how do incoming surgical residents understand what it means to be a medical professional, and how does this understanding change over their first year of postgraduate training. Through interviews with participants at both the onset and six months into their postgraduate training, we attempted to identify the key factors within training programs that influence the PIF of surgical residents. In their initial responses, participants identified the importance of relationships with patients and the public, other healthcare professionals, their training programs, and their own personal expectations to their understanding of what it means to be a medical professional. Follow-up interview responses saw a similar emphasis on relationships; however, less emphasis was placed on the influence of the public and one's own personal expectations. Specifically, participants noted the importance of working with patients and developing personal relationships with other healthcare professionals to their understanding of what it means to be a medical professional. These relationships with patients and other healthcare professionals, in conjunction with the specific work experiences surrounding these relationships, convey to participants the importance of developing a holistic professional identity, one that is prepared for a multitude of different situations through the internalization, integration, and consistent application of professional values.

If the primary goal of medical education is to support students as they develop into independent professionals, training programs must consider exactly how these factors are emphasized to students as they come to think, act, and feel like a surgeon. The results of this thesis suggest that a great deal of this understanding of what it means to be a professional is learned through relationships. Thus, training programs must carefully consider how relationships across a variety of levels–with supervisors, other healthcare professionals, peers, the program, etc.–impact the PIF process. For example, training programs must examine to what extent identity formation is made an explicit focus of training and assessment. Supervisors must not only be prepared to discuss identity formation with students, but present themselves as positive role models of medical professionals. Staff and other healthcare professionals must be cognizant of their own professional values, and how their engagement with and inclusion of students in different activities impacts their development. Similarly, professionals must be aware of the role of patient care in professional identity: to what extent does patient engagement and interaction drive the standards and expectations one holds for their profession?

Despite the relational focus of responses, the internalization of these relationships is ultimately what leads the formation of an individual's professional identity. Training programs must consider the values and beliefs that different individuals hold upon their initiation into a community of practice, and how these values and beliefs are reaffirmed, rejected, or renegotiated by their educational experiences.

Furthermore, programs must consider the consequences of students who struggle to understand their place in their profession. On an individual level, this can lead to burnout, disillusionment, or a lack of guidance as they progress through training. Perhaps more problematic, in a profession that requires a unique relationship with the public, this lack of professional identity can promote detachment or isolation in a student that can lead to inefficient patient care.

Medical education must reframe its educational goals to aid students' understanding and appreciation of professional identity. Few studies have attempted to explicitly explore PIF in postgraduate training programs. An explicit focus on professional identity should not be thought of as a means of reaffirming the pre-existing norms of their profession; rather, it should be seen as the development of critical, reflective, resilient learners who are mindful of their own relationship with medicine. Identity is a complex, fluid concept, constantly being shaped by an individual's personal, collective, and moral understanding of their world–and so is medical education. Medical education cannot be discussed without understanding its context within a larger society. As societal norms and values change over time, medicine, consequently, must adapt to serve these redefined needs. The current transition to CBME represents a timely example of how healthcare shifts in response to expectations of society. A distinct professional identity can provide an individual with a conceptual framework to continue to meet the changing requests of the public through an underlying commitment to their profession. Recalling the words of the Hippocratic Oath, a medical professional must

remain loyal and dedicated in their service to the public (Cohen et al., 2009). A well-defined professional identity not only upholds this promise, but ensures its foundational message remains the emphasis of medical education in an ever-changing world.

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Appendix A: Robert Kegan's framework for professional development (1982)

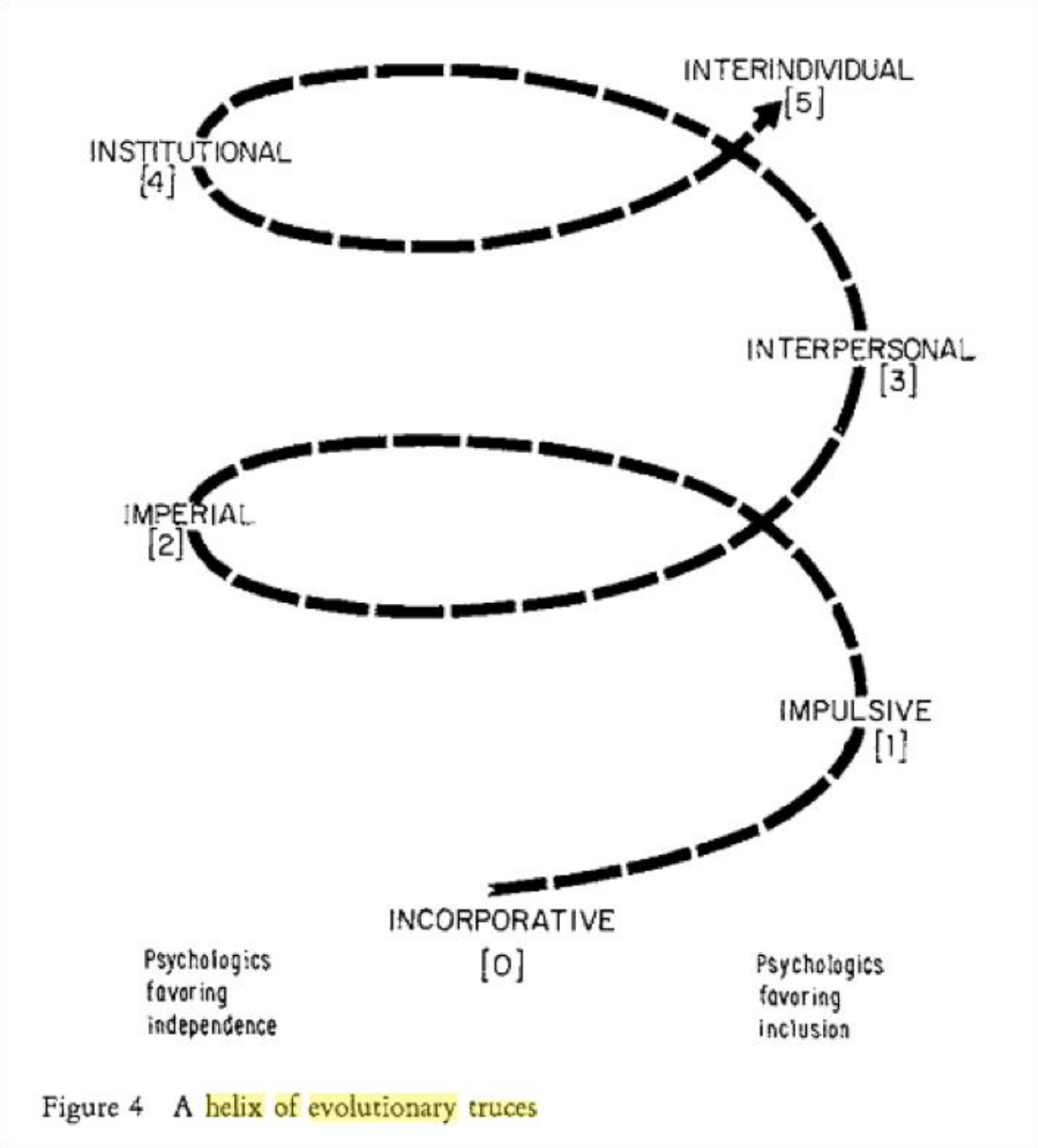
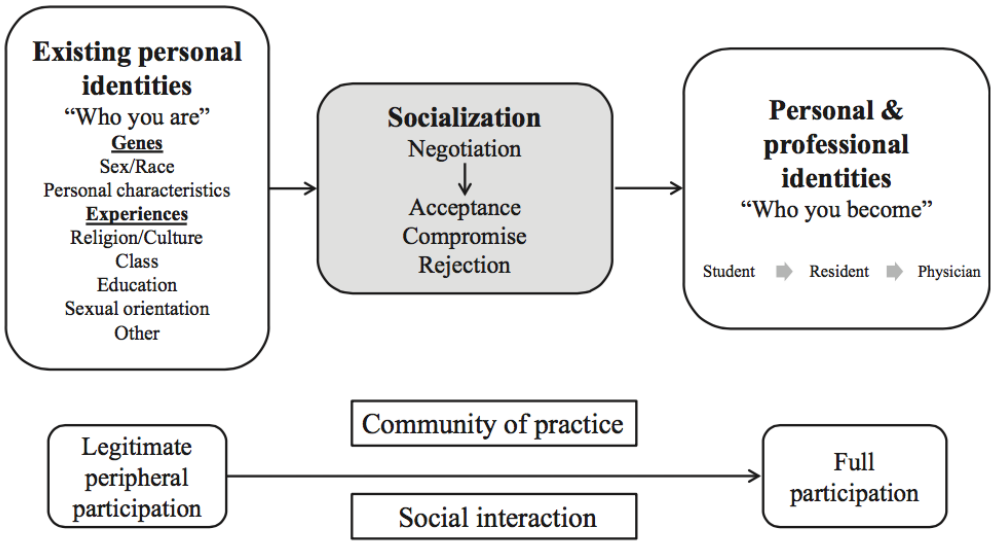


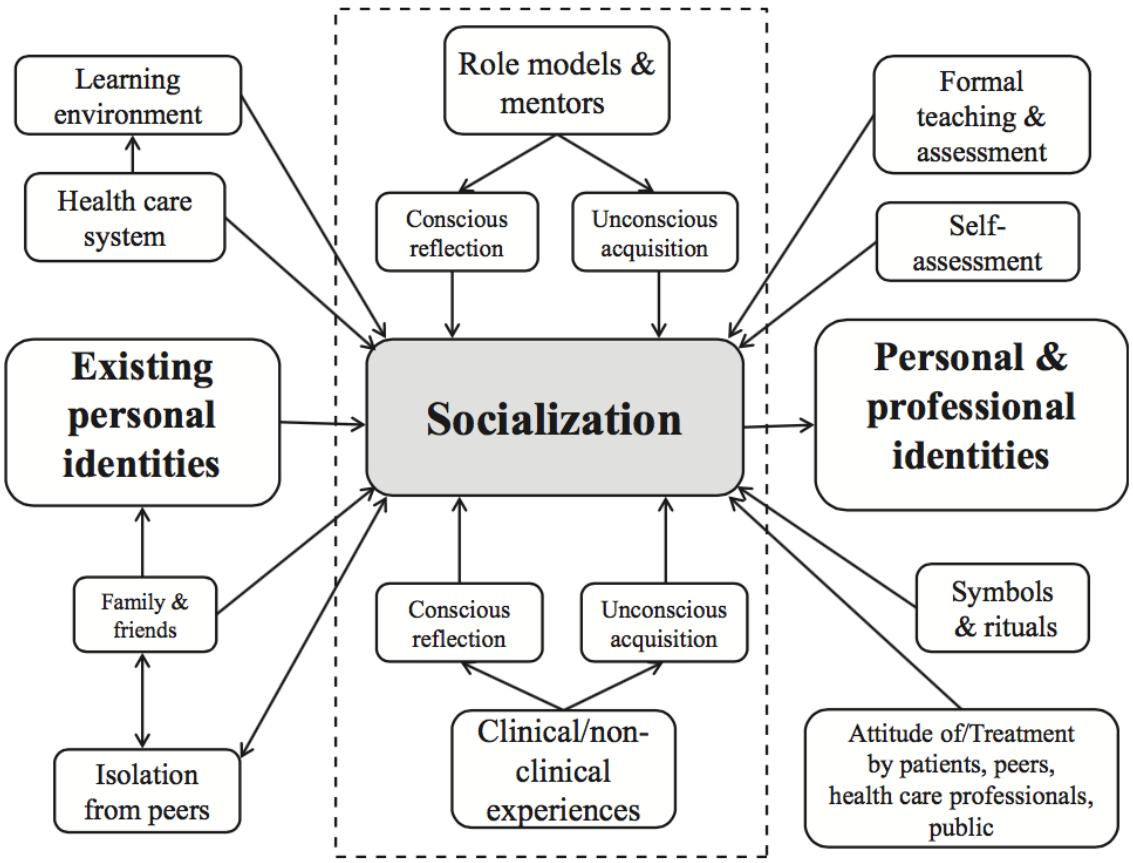
Figure 4 A helix of evolutionary truces

Appendix B: A schematic representation of professional identity formation from (Cruess, Cruess, Boudreau, Snell, & Steinart, 2015)



"Individuals enter the process of socialization with partially developed identities and emerge with both personal and professional identities (upper portion). The process of socialization in medicine results in an individual moving from legitimate peripheral participation in a community of practice to full participation, primarily through social interaction (lower portion)."

Appendix C: A schematic representation of the multiple factors involved in the process of socialization in medicine, from (Cruess, Cruess, Boudreau, Snell, & Steinart, 2015)



"The large center box surrounded by the dotted line, which includes role models and mentors and experiential learning, indicates their importance to this process. The direction of the arrows from existing personal identities to personal and professional identities indicate the dynamic nature of this process."

Appendix D: A comparison of traditional versus competency-based residency curricula from (Sonnadara et al., 2014)

	Traditional Residency Curriculum	Competency-Based Residency Curriculum
Foci	• Emphasizes learning objectives and process. • Emphasizes what the curriculum can offer students.	• Emphasizes *performance outcomes* that students need to demonstrate to pass. • Emphasizes what skills students can acquire from the training.
Duration	• Specifies a minimum duration.	• Is flexible—allows residents to progress through the elements of the program at different speeds and graduate at different times based on their individual rates of skill acquisition.
Assessment	• Emphasizes summative assessment.	• Emphasizes frequent *formative and summative assessment as well as ongoing formative feedback.*
Primary criterion for graduation	• Time.	• Demonstration of predetermined competencies.

Appendix E: Interview Guide

Initial Interview (July 2018)

1. *Review consent form with participants.* Do you have any questions?
    a. Ensure participant is aware the interview is being recorded.
    b. *Participant provides consent*
    c. Could you provide a little background information about yourself; current program/position/level?
2. What does being a medical professional in your field mean to you?
    a. What type of skills do you associate with this understanding?
    b. How did you come to this understanding?
    c. Have you found this idea built into the curriculum of previous training programs?
    d. How do you envision this idea being emphasized in your current program?
3. Think of someone that you consider an exemplar of professionalism. Describe why you chose this person, illustrating with an incident or decisions or actions and traits that support your choice.
    a. What is your relationship with this person?
    b. How and where do you primarily interact?
    c. What about peers? What role do they play in your understanding of what it means to be a professional?
4. What are your expectations of yourself as you move towards becoming a full-fledged professional?
    a. Have you found these expectations come from the curriculum of previous training programs?
    b. What conflicts have you experienced (or expect to experience) between your own expectations and that of your patients/family/profession?
    c. What would be the worst thing if you failed to live up to the expectations of yourself/patients/family/profession?
    d. How do you expect your current program to assist you as you progress as a professional?
5. Is there anything else you would like to add, or are there any other types of experiences that you think could change how we view what it means to be a professional?

Follow-Up Interview (January 2019)

1) *Review consent form with participants.* Do you have any questions?
    a. Ensure the participant is aware the interview is being recorded.
    b. *Participant provides consent*
    c. Could you provide some background about yourself, your current program/level, and your participation in your training program?
2) What does being a medical professional in your field mean to you?
    a. What type of skills do you associate with this understanding of what it means to be a professional?
    b. How is this idea taught/emphasized in your residency program?
    c. How has this idea changed since you first came into your program?
        i. Could you perhaps provide an example/instance that changed your understanding of what it means to be a medical professional?
3) How have your relationships with supervisors in residency impacted your understanding of what it means to be a professional?
    a. How have your relationships with peers in residency impacted your understanding of what it means to be a professional?
4) What are your expectations of yourself as you move towards becoming a full-fledged health professional? (i.e. what are your hopes or plans for your future as a graduated, independent professional?)
    a. How have you noticed your own expectations change as you have progressed through the program?
        i. Do you feel like these expectations are explicitly built into your training program?
        ii. Could you provide an example/instance to illustrate how your expectations have changed as you have progressed through your training program?
    b. What conflicts have you experienced between your own expectations and that of your patients/family/profession?
        i. Do you think there is ever a conflict between what is expected of you as a trainee versus work obligations?
    c. What would be the worst thing if you failed to live up to the expectations of yourself/patients/family/profession?
5) Is there anything else you would like to add, or are there any experiences do you think have changed your view of what it means to be a professional?