Changes in Self-Perceptions of Professionalism in General Surgery Residents Following Introduction of a Professionalism Education Program

by
Rebecca Christine Whitley

A thesis submitted to the faculty of Graduate Studies of the University of Manitoba

In partial fulfillment of the requirements of the degree of

MASTER OF SCIENCE

Department of Surgery
University of Manitoba
Winnipeg

Copyright © 2016 Rebecca Whitley
‘Professionalism: it’s not the job you DO, it’s HOW you DO the job.’ - Anonymous
Table of Contents

ACKNOWLEDGEMENTS 5
DEDICATION 6
ABBREVIATIONS 7
ABSTRACT 9
INTRODUCTION 11
  Background 11
  History and Evolution of Professionalism in Medicine 11
  The Importance of Professionalism 12
  Current Definitions of Professionalism 15
  Core Principles of Professionalism 17
  Professional Identity and Professionalism 19
  The Hidden Curriculum 22
  Teaching and Measuring Professionalism 24
  The McGill Experience 28
METHODS 33
  Ethics 33
  Timeline 33
  Survey Construction 34
  Recruitment 36
  Consent 36
  Intervention 37
RESULTS 52
  Demographics 52
  Response Rates 52
  Factor Analysis 53
  Qualitative Analysis 55
DISCUSSION 72
  Changes in Self-Perceptions 72
  Emotional Intelligence 74
Acknowledgments

I would like to acknowledge my thesis advisor, and mentor, Dr. Debrah Wirtzfeld. Without your passion and dedication for positive change, and without your encouragement and support, this project would not exist. Thank you for believing in me.

I would also like to thank Margaret Shiels for your invaluable administrative support throughout this entire project.

I would like to acknowledge the unwavering support and encouragement of my family, and especially my husband, and son. You have been my greatest cheerleaders and this accomplishment would not have been possible without your support or your sacrifice.

And finally, I would like to thank my Father. Your steadfast kindness to me is unfathomable. From you and through you and to you are all things.
This thesis is dedicated to my dad, who has spent the last thirty-seven years demonstrating to me what true and transformational leadership looks like; that integrity, compassion, excellence and accountability are costly, but that the cost is infinitely and eternally valuable.
Abbreviations

AAMC - Association of American Medical Colleges
ACGME - Accreditation Council for Graduate Medical Education
AMA - American Medical Association
APA - American Physiotherapy Association
CME - Continuing Medical Education
CPSM - College of Physicians and Surgeons of Manitoba
EI - Emotional Intelligence
EQ - Emotional Intelligence Quotient
IFMSA - International Federation of Medical Students’ Association
MMI - Multiple Mini Interviews
NHS - National Health Service
OSCE - Objective Structured Clinical Examination
PEP - Professionalism Education Program
RCPSC - Royal College of Physicians and Surgeons of Canada
SP - Standardized Patient
THEnet - Training for Health Equity Network
UGME - Undergraduate medical education
WHO - World Health Organization
The practice of medicine is not a business and can never be one ... Our fellow creatures cannot be dealt with as a man deals in corn and coal; the human heart by which we live must control our professional relations.

Sir William Osler, 1903
Abstract

Objectives:

While there are characteristics of professionalism that seem to be innate in some people, we believe that these same characteristics can be taught and developed. Our objectives included:

1. Defining Professionalism, and the associated principles, as they relate to the General Surgery Residency Program at the University of Manitoba.
2. Adapting/developing a tool that can measure these defined principles.
3. Developing and implementing a 6-month Professionalism education program within the General Surgery Residency core curriculum at the University of Manitoba.
4. Measuring changes in self-perceptions of professionalism following the introduction of the professionalism curriculum.

Methods:

1. A previously validated questionnaire detailing self-perceptions of professionalism was administered to all General Surgery residents at the University of Manitoba.
2. A six-month, five-part professionalism education program was implemented (the intervention):
   - A ‘Defining Professionalism’ session was held
• A Code of Professionalism was developed from the ‘Defining Professionalism’ session
• Crucial Conversations® was administered
• Residents took part in a Professionalism Journal Club
• Residents participated in a cinemeducation session

3. Post intervention, the same previously validated questionnaire was administered to each General Surgery resident who consented to participate in the study. There was an additional online survey which asked participants to detail a situation in which they had used principles or strategies learned in the training program to achieve a breakthrough in professionalism.

4. Dr. Kelleher completed follow-up interviews with participants, on a volunteer basis. The questions detailed participants’ definitions of professionalism and whether residents thought professionalism can be taught.

Results:

With the administration of a Professionalism Education Program (PEP), self-perceptions of professionalism showed significant improvement in the area of Social Responsibility, and trends towards significant improvement in several other core components of professionalism. There were also improvements in self-awareness as it related to professionalism. This self-awareness led to a self-perceived improvement in professional behaviour.
Introduction

Background

It has been said that no one really cares until something dramatic happens. This is often the case with regards to issues of professionalism. The topic of professionalism and its core components often go undiscussed, untaught, and are even derisively referred to until it is too late. Unprofessional behaviours occur, are subsequently propagated and perpetuated, resulting in learned behaviour as a result of role modeling. This creates a culture of unprofessionalism. This is an especially accurate depiction of the (not so) hidden culture of unprofessionalism in medicine. The medical profession, mirroring and even lagging behind society, is often reactive when a proactive approach is required.

History and Evolution of Professionalism in Medicine

The origins of the medical profession, along with law and the clergy, began in medieval times and gave rise to our modern-day social contract. This social contract includes the premises that 1) non-members are unable to practice, 2) the profession is self-regulated (who is permitted to enter the profession, length of training, and evaluation is decided upon by the profession), and 3) cooperation with governmental agencies is necessary for the purpose of monitoring. This social contract creates the basis for the fiduciary relationship between the
medical profession and society, and is the foundation of trust, between the profession and society, and between caregiver and patient.

Established in 1847, the American Medical Association (AMA) set as its primary goal raising ethical standards in the medical field. In 1876, the Association of American Medical Colleges (AAMC) was formed to restructure medical education and influence standards and codes of ethics for medical schools, residency programs, medical boards, and other areas of healthcare. The Flexner report and the subsequent restructuring of medical training in 1910, marshalled the first wave of “medical professionalism” and the recognition that explicit acknowledgment and education in professionalism was imperative. Between 1942 and 1981, multiple committees and working groups were initiated to continue to discuss and coordinate changes to professional standards and medical education.

Since the mid 1980’s, there has been a shift and an ongoing commitment to advance the principles of professionalism in the context of medicine. The AMA and AAMC have now recognized the importance of fostering and evaluating professionalism in physicians in training and in practice. The AAMC Medical School Objectives Project urges medical schools to teach these skills. The Accreditation Council for Graduate Medical Education (ACGME) defined these skills as core competencies that programs must include and evaluate in their training programs. The American Board of Internal Medicine (ABIM) has included an evaluation of communication skills and professionalism in the recertification process of practicing physicians. Finally, the Royal College of Physicians and Surgeons of Canada (RCPSC) has now included ‘Professional’ in their CanMEDS teaching.
Since the 1980’s, the landscape of the medical profession has changed. These changes, largely driven by social, economic, and technological change and advancement, have altered the appearance and function of medical professionalism. Shifting priorities include a focus on patient autonomy and choice, governance, alternative education methods. A focus on expert knowledge, and a desire for work-life balance on the part of the trainee and new to practice physicians. These shifting priorities manifest in reduced paternalistic attitudes, increased self-directed learning, changes in evaluative methods, and shared or group practice models. Concepts like altruism, paternalism and privilege are increasingly rejected in favour of work-life balance, holistic care and social accountability. The National Health Service (NHS) in the UK implores physicians to challenge paternalistic attitudes and focus on patient treatment preference; medical schools across the UK and North American are including formal education on medical ethics and professionalism into their curriculums.

The Importance of Professionalism

The importance of professionalism to the practice of medicine cannot be understated. The root of professionalism lies within the profession, in this case a healing profession. The components that make up a profession include: a set of philosophical assumptions, a code of ethics, a body of knowledge, a domain of interest/concern, aspects of practice, valid and appropriate tools, structure, and empirical research. This profession requires the acquisition and application of knowledge and technical skill required to heal. Shared priority and commitment bind together individuals within the healthcare system most notably through the pledge of the Hippocratic Oath, medical licensing boards and peer-review.
Encompassed within a medical practice are many privileges including: (1) the ability to self-regulate, (2) autonomy within patient interactions, (3) public esteem, and (4) financial security as a result of well-compensated employment. Receiving MD distinction does not automatically grant these privileges. Instead there is a tenuous agreement between society and the profession of medicine, with fair and distinct expectations on the part of patients.

Cruess and Cruess write that professionalism encompasses a relationship that ‘underpins the trust that the public has in doctors.’ This trust requires commitment on the part of both the profession of medicine and society, to achieve mutual goals. Patients present to physicians in a vulnerable state- sick, often anxious, with limited knowledge or understanding of their ailment, and in need of care. These patients expose weakness in the face of possible exploitation, placing trust and faith in the physician’s competence, knowledge and goodwill. Falling short of society’s expectation damages the relationship between society and the profession of medicine. This relationship involves:

1. The welfare and prioritization of the patient- a commitment to patients’ interests, with benevolence and beneficence strengthening the doctor-patient relationship.

2. Patient autonomy- a requirement to help patients make informed decisions about treatment while respecting autonomy.

3. Social equity- working to promote healthcare equity and equality.
Though once revered, trustworthy and honoured, the medical profession, and specifically doctors, are increasingly mistrusted by the general public. In 1966, an American survey cited that \( \frac{3}{4} \) (75%) of American citizens had great confidence in medical professionals. More recently, that number is 34%.\(^3\) This shift in attitude is largely due to the increase in medical negligence, complaints, lawsuits, negative media coverage, as well as the ‘fee for service’ business model.\(^3\)\(^6\)\(^7\)\(^8\)\(^9\) Choy and Ismail cite the following issues in their study as being key indicators in the ongoing mistrust and derision: lack of autonomy, poor communication, poor bedside manner, non-disclosure of alternative treatment, and medical complications.\(^4\) Further evidence suggests that as today’s doctors are faced with value-threatening problems and issues, professionalism wanes in importance and utilization.\(^4\) As professionalism deteriorates, so too does the trust and respect for physicians, eroding the crucial relationship between the profession and society.

**Current Definitions of Professionalism**

In order to address deteriorating professionalism and the fractured relationship between physicians and patients, there needs to be an understanding of what professionalism truly is. Medical educators across the continent are seeking to address this deterioration, recognizing that changes to the current medical culture, the learning environment, and to curricula are required to promote and improve professionalism.\(^4\)\(^2\)\(^3\)\(^4\)\(^4\)\(^5\)\(^6\) However, medical professionalism continues to be a vague and ambiguous term. Definitions vary in significance with regards to attitudes, knowledge, skill, behaviour and values.\(^4\)\(^7\)\(^8\)\(^9\) The outdated
paternalistic and detached methodology of professionalism is being replaced by an empathic, engaged and holistic one. (figure 1). 50

One such new definition of professionalism, and the definition used for this project, has been put forth by Epstein and Hundert as ‘the habitual and judicious use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflection in daily practice for the benefit of the individual and community being served.” 51 Although many of the original principles of professionalism remain the same, changes in the social, economic and technological landscapes have altered the appearance and presentation of professionalism in the field of medicine, and in particular surgery. 52 Changes having the greatest effect on medical professionalism today include the desire for work-life balance, patient-centred care, health-care budgets cuts, and the advent of electronic medical records, smart devices, and social media. These changes make it increasingly challenging to define, address, and reaffirm the value of professionalism, specifically medical professionalism. 53 As the span of social, cultural, legal, economic, political, and religious change confronts the medical profession, the trust and binding contract between the field of medicine and society is destabilized. These changes have resulted in deterioration of quality care, efficiency, and patient privacy and they demonstrate a progressive deterioration in the profession of medicine’s commitment to the good of the public. 54 Cruess and Cruess in 2005 further defined professionalism as a set of values, behaviors, and relationships which underpin the trust that the public has in doctors. They put forward a model outlining the attributes that encompass medical professionalism (figure 2). 57
Medical professionalism is particularly important in a surgical specialty. Too long has the officious, patriarchal, uncompassionate surgeon with a lack of bedside manner stereotype ruled public perception. Increasingly the issues of communication, competence, judgment and respect are discussed and evaluated, however there seems to be a lack of education and development surrounding these important characteristics in surgical programs. Evident changes within surgical departments include a shift away from the paternalistic approach, the nurturing of a partnership between the health care provider and the patient, an embracing of a more holistic approach to health, the desire to work in teams, improved collegiality between medical specialists, and a shift away from self-sacrifice to favour sharing responsibilities and practices. Because of these changes, specific principles of professionalism need to be re-evaluated, addressed, and discussed. The development of programs designed to educate and develop professionalism are crucial in moving forward.

Core Principles of Professionalism

In order to design a Professionalism Education Program, a definition of professionalism must be agreed upon, and core components must be identified and defined with and for the learners. Research shows that when employees pitch their own ideas for projects, they take ownership of the work and are more committed to implementation and follow through. This is assumed to be no different in medical education, with regards to professionalism education. Allowing learners to help define what makes up professional behaviour, core concepts and components, creates increased ownership and investment in the
material. The core components discussed and adopted for the sake of this Professionalism Education Program include the following:

- **Altruism** - the primary regard for or devotion to the interest of patients and colleagues
- **Accountability** - active acceptance of the responsibility for the diverse roles, obligations and actions of the physician. These include self-regulation and other behaviours that positively influence patient outcomes, the profession, and the health needs of society
- **Compassion/Caring** - the desire to identify with or sense something of another’s experience; a precursor of caring. Caring is the concern, empathy and consideration for the needs and values of others
- **Excellence** - consistently keeping up to date with current knowledge and theory, understanding personal limitations, exercising good judgment, challenging mediocrity, and developing new knowledge
- **Integrity** - the steadfast adherence to high ethical principles or professional standards; truthfulness, fairness, authenticity, and following through on commitments
- **Professional Duty** - the commitment to meeting one’s obligation to provide effective surgical services to individual patients, to serve the profession, and to positively influence the health of society
• Social Responsibility- the promotion of mutual trust between the profession and the larger public that necessitates responding to societal needs for health and wellness

Professional Identity and Professionalism

Because of the emphasis on the importance of teaching professionalism in medical school, the concept of professional identity has been raised. It has been posited that unless learners develop a desirable professional identity, all the knowledge and skill obtained for their field of employment will not be enough for success in their career. Professional identity refers to how the learner perceives himself/herself as a doctor, whereas professionalism refers to the ownership and demonstration of professional conduct. Cordoso et al, in their analysis of professional identity, discuss the increase in the number of publications on the topic of professional identity between 2002 and 2011. They noted that publications increased over the nine-year period, with the majority of publications produced in 2011. Dubar, a researcher interested in professional identity, explained that "basic professional identity not only constitutes an identity at work, but also and more importantly, a projection of oneself in the future, the anticipation of a career path, and the implementation of a work-based logic, or even better, a training-oriented logic." It has been surmised, by Mohammed Jebril in his PhD thesis on professional identity, that learners develop professional identity as characterized by the following themes:
1. Formation of professional identity starts in childhood and is an ongoing process.  

2. Development of professional identity includes ongoing integration of internal and external factors.
   a. Personal - cognitive, skill and experience, and professional independence  
   b. Professional - external image and status, philosophy, body of knowledge and culture

3. Professional identity evolves - “theoretical development, individual change in meaning, function and experience that enhance individual survival in [an individual’s] profession.” According to Jebril, these changes in meaning, function and experience are transferable through learning and are not genetically inherited.

4. Professional identity adapts - internalization of professional identity related to the experience of occupational challenge.

5. Professional identity is learned. Jebril writes that professional identity is not ‘something that happens to you, but something that you try to construct with the help of culturally available materials and resources.’ Also noted in professional identity research is the idea that language and specialized words demonstrate professional uniqueness, and have a role in the development of professional identity, and thus professionalism.

Learners enter the field of medicine with an established personal identity, and throughout their learning, they internalize the language, attributes and culture of the environment they are in. They strive to obtain and demonstrate the identity of a physician. Their sense of professional identity develops over the course of their training, both formal and informal. Because of this, the educational environment must strive to support the development
of a professional identity. Medical schools and residency programs must be aware and accountable for the professional identities they present.\textsuperscript{89}

Stages of professional identity development occur in 4 phases: preoccupation, learning, professional and post-professional.\textsuperscript{90} Interaction during childhood with parents, family and friends will largely inform and address the preoccupation phase of professional identity. Upon reaching adolescence, many individuals begin to understand self, personality traits, profession, and what their futures might entail. Early establishment of professional identity is closely linked to self-awareness during this phase.\textsuperscript{91} As part of the evolution of the learning phase, Jebril writes, “the emphasis...is to learn the professions’ theoretical underpinnings; gain knowledge of the skills and tasks related to the chosen profession; learn the profession language, ethics and morals; be able to relate self to the profession; deepen the integration of the profession into oneself; and socialize self as a professional.”\textsuperscript{92} The construct of professional identity is at its peak in this phase as is knowledge and understanding of self. This peak understanding and establishment of professional identity drives the decision regarding the fit between the professional and the newly developed professional identity. Sometimes there is misalignment and a new profession is sought out. Unfortunately, most often, professional identity is altered and shaped to match the attitudes, values and opinions of the chosen profession.\textsuperscript{93, 94, 95} These attitudes, values and opinions can be explicit, but are more frequently expressed as part of the hidden curriculum.

It is important to note that having a well-established professional identity does not preclude challenges or even disintegration of professional identity. Professional identity can
diminish or enter maintenance mode as a result of workplace conflict and crisis. This
maintenance mode allows the individual to re-evaluate their characteristics of their core
professional identity in order to reshape or restructure for subsequent conflict.96

*The Hidden Curriculum*

Originally described in the 1960’s and applied to the topic of medical education in
1994 by Frederic Hafferty, the popularity and reach of the subject of the ‘hidden curriculum’ has expanded over the last 50 years.97 98 99  Hafferty, a Behavioural Sciences professor at the University of Minnesota, noted multiple problems within the healthcare system which included a breakdown in the patient-physician relationship, a lack of advocacy, a new patient as consumer attitude, and technological advances that had begun to present ethical and moral dilemmas for many physicians. As a result of these emerging challenges, Hafferty felt that a greater emphasis should be placed on ethics and professionalism education within medicine, writing, “formal education in medical ethics [read professionalism] does not take place within a cultural vacuum.”100  Hafferty and Franks define the hidden curriculum as a “set of influences that function at the level of organizational structure and culture”101 being “more concerned with replicating the culture of medicine [rather] than the teaching of knowledge and techniques.”102  He further defined this curriculum as the “understandings, customs, rituals, and taken-for-granted aspects of what goes on in the life-space we call medical education” stating that these were most visible within policy development, evaluation, resource allocation, and institutional slang.103  Further discussed is the idea that these influences are often in direct opposition to what is explicitly taught within ethics and professionalism sessions, and that as a result, there is
a “progressive decline of moral reasoning” at the level of undergraduate medical education. In the 25 years that have followed, many researchers have gone on to study this phenomenon and the consensus has been that the hidden curriculum carries more influence than the formal explicit curriculum, and that this has been detrimental to the profession of medicine.  

A recent systematic review, done by Lawrence et al in 2018, revealed almost 3000 research studies on the topic of the hidden curriculum. Almost half of these were published in the last 6 years. One of these recent studies, done by Martimianakis et al in 2015, linked the formation of professional identity among medical graduates as being most directly affected by the hidden curriculum. Balboni and colleagues, in their 2015 study surrounding spirituality and the hidden curriculum, wrote that the hidden curriculum “instills behaviors, attitudes, and values among trainees in tension with the ideals of the medical profession.” Further studies since 2012 go on to associate and attribute the erosion of idealism, worsening cynicism, and negative bias within medical trainees to the hidden curriculum. A widespread complaint among medical trainees is that they are expected to behave in a professional manner but are frequently exposed to unprofessional behaviours in their teachers and mentors.  

Another study done by MacLeod in 2014 suggested that it may be time to stop referring to this concept as the hidden curriculum; that we instead actively and intentionally address these now visible and identified attitudes and practices. Lawrence et al concluded their systematic review with the suggestion that what has been hidden must be explored, and addressed and that out of this, curricula can be created and tools for measuring this curricula can be developed.
Stern, in his book on medical professionalism, states that “ensuring that students of medicine at all levels not only acquire but consistently demonstrate the attributes of medical professionalism is arguably the most important task facing medical educators here at the beginning of the twenty-first century.” Recognizing the importance of the learning environment and formal medical curricula on the formation and internalization of professional identity and professionalism, and recognizing the damage that the 'hidden curriculum' has done, attention must be turned to teaching and measuring professionalism. The literature is also clear that self-reflection and self-awareness should be an essential part of the learning process, and therefore, a requirement for professional development. In many Western countries, it has become a requirement to ensure maintenance of accreditation of medical schools and residency/fellowship training programs.

Adding ‘professional’ to the CanMEDS framework by the Royal College of Physicians and Surgeons of Canada demonstrates to learners and faculty alike that professionalism is a competency. Defining it as a competency makes it explicit. However, the danger in making it explicit is the tendency to treat professionalism as obvious, and then not providing adequate training or evaluation. Stern, in his 2005 book on medical professionalism, refers to the responsibility of training programs to help residents understand that professionalism is not a “surface” issue, or simply the act of doing a job in a “professional manner.” He puts forward the notion that “surface professionalism sidesteps issues of identity and treats professionalism as something physicians can put on and take off like one’s stethoscope.”
Despite the profound importance of teaching and learning professionalism, there is a huge barrier: the lack of a reliable or convincing set of tools to measure professional behaviour. Although, training programs have made important advances in how they assess knowledge, and skill, the assessment of attitudes, values and professional behaviours have fallen behind. Despite the inclusion of ‘Professional’ in the CanMEDS framework, evaluative criteria are often confusing and vague. This ambiguity, as well as a lack of available or adequate evaluation creates a conflicting message to learners. Stern, in his 2005 book on medical professionalism, refers to the idea that as medical professionals, “we espouse and champion the idea of professionalism, but little is done to ensure it.” If professionalism is not explicitly discussed during learner evaluations, or it is casually referred to as ‘fine,’ the evaluator communicates that the issue of professionalism in not important. Thus, adequate, constructive and timely evaluation surrounding professionalism is paramount.

In recent years there has been a focus on developing ‘professionalism’ curricula within the medical learning environment, often teaching it as a separate concept from the rest of the medical curriculum. The literature describes two methods for teaching professionalism, either explicitly as a series of traits, or as a moral endeavor (reflection and experiential learning). This same literature shows that neither of these methods is sufficient. Defining and listing traits gives a theoretical knowledge, however it omits a practical component. Simply relying on role-modeling often backfires, normalizing and promoting unprofessional behaviour by unprofessional role models. Employing both methods ensures that learners understand the nature of professionalism and internalize the components and their values.
Sullivan et al, in their 2005 article on work and integrity, refer to the fact that professionalism teaching should not be a standalone segment of medical education, but a “defining dimension of medical education as a whole.” In order to develop and maintain successful professionalism development programs, there are several things to consider. Cruess and Cruess put forward the following items which are necessary for successful professionalism development programs:

**Support, Continuity and Incentivization**

Both administrative and financial support from the involved institution ensures greater success of professional development curricula. Appointing a connected and well-respected individual to a program directorship helps to promote learner, staff, and faculty buy-in. Allocating protected time and resources to professionalism curricula, and taking an incremental approach, building on successful initiatives, further promotes success. Incentivizing staff and faculty with reward systems such as promotion/professorship policies have a profound and lasting impact within the learning environment and on the attitudes, and values of the learners.

**Internalization of Key Concepts of Professionalism**

Agreed upon definitions of professionalism, and professionalism education curricula must be disseminated to all professors, administrators, staff and learners establishing a cognitive base and common language of professionalism. These concepts must be taught explicitly and often. Engaging in experiential learning and self-reflection aids in internalization of professional values and serves as a base for professional identity. Consensus exists that
students must experience situations in which these values become relevant or challenged as a necessary first step in the process of internalization. Time for reflection in a safe environment is also necessary for internalization of professional behaviour. These experiences can be real clinical situations, involve practicing with standardized patients in a role-play method, and can also be supplemented with reflection on experience from simulated clinical situations, small group discussions, clinical vignettes, role plays, film and video tape reviews, narratives, portfolios, social media, or directed reading.

**Role Modeling**

Additionally, role modeling is important and faculty development will be required to help individuals understand what their behaviour communicates to trainees, and to understand the need and positive impact they can have. Assessment and evaluation of behaviour is mandatory, and there MUST be positive and negative consequences. Poor role models must undergo remediation, and those who cannot or will not model professional or ethical attitudes or behaviours should be removed from a teaching and mentoring position.

**Evaluation and Faculty Development**

Evaluation of both knowledge and behaviour is also paramount. Knowledge can be evaluated in a traditional way using multiple choice, short answer or essay type questions. Attitudes and behaviours are difficult to evaluate in this way, and so evaluation of observable behaviour must be undertaken. These observable behaviours reflect the underlying attitudes and values. Trainees undergoing multiple evaluations by multiple observers provide reliable and valid results. Faculty development is also vital in the
process of addressing, developing and teaching professionalism curriculum. This process allows faculty to help create curriculum, take ownership of the material, and helps to ensure skilled educators, leaders and role models.

The Hidden Curriculum

Evaluation of both the trainee and the trainer must be carried out in order to begin correction some of the damage done by the ‘hidden curriculum.’ The teaching/learning environment, including formal, informal and ‘hidden’ curricula, must be evaluated. The impact and effect of the hidden curriculum is most profoundly seen within the area of professionalism due to its dependence on personal and institutional values. All 3 areas of curriculum MUST be addressed in order to assess and improve professional values. The formal curriculum includes material consistent with the mission statement of the institution complete with course objectives. This material outlines what faculty believe they are teaching. The informal curriculum contains impromptu, subjective and unplanned forms of teaching. These lessons can occur wherever students and faculty have contact, ie: in the classroom, hallways and elevators. In these moments, both positive and negative influence can be exerted. The hidden curriculum occurs within the organizational structure and in the culture of an institution.

The McGill Experience

In 1997, McGill University introduced a professionalism curriculum in their medical school. Over the subsequent six years, they incrementally developed and added to the
Faculty development workshops allowed faculty to brainstorm and develop agreed upon definitions, learner attributes and curriculum components to be taught and evaluated. These definitions and components became the medical school administration's basis for student selection, curriculum, and evaluation of all learners (medical students and residents) and faculty.

**Student Selection**

The student selection process changed from a panel-style interview, to multiple mini interviews (MMI). These 10 station simulations, which utilized actors and potential medical scenarios, were designed to draw out and demonstrate values and behaviours felt to characterize the 'model physician.' Out of these simulations, applicants who already demonstrated attributes and values consistent with the professionalism curriculum could be identified and chosen, as well as made to understand that these attributes were important to the administration. The MMI contributed towards 70% of the applicants final ranking on the admission scale. Further data indicated that the MMI score correlated with clinical performance throughout medical school.

**Curriculum Development**

Several educational components were integrated into the undergraduate and postgraduate training programs. These components included entire class activities regarding
professionalism, rotation specific activities in various departments, and a mentorship program. Topics such as ethics, components of professionalism, and end of life care were identified by faculty as being important. Previously taught curriculum was expanded to add agreed upon definitions and curriculum components from faculty development workshops. A longitudinal course on ‘Physicianship’ was also implemented. This course contained overlapping curriculum regarding the physician as healer and professional.147 148 149

Class curriculum included lectures on components of professionalism, ethics, didactic sessions on definitions and vocabulary, courses on communication skills, and small group sessions with trained faculty guidance on specific scenarios that demonstrated professional and unprofessional behaviour. In the last year of medical school, learners were required to attend workshops which detailed the issue of medicine's social contract with society and the components of a fiduciary relationship. Students were given time to reflect on which aspects they might find challenging and how to overcome specific difficulties. These workshop discussions were led by professional mentors whom the students had met with over the course of their medical school training. This allowed for familiarity, a higher comfort level in sharing around vulnerable topics, and continuity of mentorship and care. Rotation specific activities include department rounds, bedside teaching surrounding issues of professionalism, and professionalism assessments throughout the rotation. Learners were encouraged to discuss and reflect on these situations with their mentors.

The ‘Osler Fellow’ mentorship program was established on a nomination basis by students as well as faculty. The winners were recognized as being excellent teachers, physicians, and role models. While this fellowship created a mentorship program for undergraduate
learners, it also provided an evaluative component and reward program for faculty members who were recognized and distinguished. Osler Fellows were given dedicated faculty development training regarding their role as mentor, teacher, role model, and professional. Each mentor was assigned six students to mentor throughout their medical training, and specific mandated activities and discussions surrounding professionalism were outlined to be completed.

**Evaluation**

Throughout postgraduate training, learners were required to attend review sessions on professionalism using the previously agreed upon definitions and vocabulary. Small group sessions combined residents from different programs who were required to discuss their experiences of professionalism (or lack thereof) during their training. Emphasis was placed on discussion about how they would fulfill their contract to society and how to mitigate problems and difficulties. Resident involvement in undergraduate sessions as group leaders was mandatory, as well as participation in professionalism assessment of students and faculty. Other mandatory academic sessions at the postgraduate level included topics regarding ethics, risk management and practice insurance, teamwork, communication skills, and health and wellness. Further research is required to examine and assess the success of McGill’s experience compared to other Canadian medical schools and postgraduate training programs.
Other forms of evaluation besides those used in the McGill program can also be utilized. In 2009, Wilkinson et al performed a systematic review on ways to assess and evaluate professionalism. These forms of evaluation include observed clinical encounters, multisource feedback and 360-degree evaluations, patient opinion, paper-based testing, review of critical incidents and lapses in professionalism, standardized patient clinical scenarios, and self-assessment.153

With the current literature regarding professionalism, professional identity, and the blatant need for professionalism education within medical training, the question became whether characteristics of professionalism could be taught to the General Surgery Residents at the University of Manitoba. The purpose of this research was to measure changes in self-perceptions of professionalism after the implementation of a Professionalism Education Program.
Methods

Ethics

The research protocol was approved through the University of Manitoba Research Ethics Board prior to implementation of the study. Funding was obtained from the HSC Medical Staff Council Fellowship Fund.

Timeline (figure 3)

A literature review was undertaken from March to May of 2015. The Professionalism Education Program was developed from this review by the end of June 2015. Informed consent was obtained from each participant at the end of June 2015, and the pre-intervention survey was administered to each consenting resident. In July of 2015, the Professionalism Education Program formally began. The Defining Professionalism Session occurred in early July 2015, the Code of Professional Conduct tag (p.41) was disseminated to the General Surgery residents in mid-July, and the Crucial Conversations® course (p. 44) was run from mid-July through to August. In September 2015, the Professionalism journal club (p.46) was held, and in October, the cinemeducation session (p.49) was run. An in-depth explanation and discussion of the Professional Code of Conduct tag was held at the annual General Surgery residents’ retreat in October 2015. The post-intervention survey was administered in November.
2015. At the same time, the survey monkey link intervention (p. 53) was sent out to all participating residents.

Between December 2015 and April 2016, residents were sent weekly reminder emails to complete the post-intervention survey (p.52) and SurveyMonkey© (p.53) responses. Interviews (p.53) were held between March and April 2016.

Survey Construction

Pre-/Post-Intervention Survey

A literature review was undertaken using the terms medical professionalism, professional identity, principles of professionalism and professionalism education in order to identify previously validated measurement tools of self-perceptions of professionalism and professional behaviour within the healthcare field. The American Physiotherapy Association (APTA) assessment tool (appendix A) met our criteria of defining core principles of professionalism, allowing for self-assessment of attitudes and professional behaviours, and having previously been validated in a healthcare population. The survey details seven core principles of professionalism and accurately reflected the definition and core principles of professionalism as defined by the Professionalism session (component 1 of the Professionalism Education Program). The seven core principles include:
• Accountability
• Altruism
• Compassion/Caring
• Excellence
• Integrity
• Professional Duty
• Social Responsibility

The only adjustments made were those that made the survey contextually relevant to a surgical resident population. The word surgeon was substituted for physiotherapist and activities specific to physiotherapy were deleted. The proposed changes were submitted to the APTA for approval, which was received prior to use of the survey.

*SurveyMonkey® Intervention Survey*

A SurveyMonkey® survey (appendix B) was developed to allow for the collection of qualitative information regarding self-perceptions of professionalism. This was added to alleviate concern that the quantitative data would not show that the Professionalism Education Program made a difference, that the pre-intervention survey responses would potentially be too favourable to show any significant improvement in the post-intervention scores. In addition to gaining information regarding level of training and gender, the survey included several open-ended questions related to the intervention. While the pre- and post-intervention surveys provided quantitative data, the
SurveyMonkey® intervention provided qualitative data, enhancing the quantitative data and improving understanding regarding self-perceptions of professionalism.

**Recruitment**

General Surgery resident recruitment of all 26 eligible residents was initiated by a neutral third party during a General Surgery residents’ academic half day session. Dedicated time was obtained for a description of the project, including all surveys and the proposed timeline, and discussion of involvement on the part of the residents. An email with the same description of the project was sent to all residents not present at the session.

**Consent**

Informed consent (appendix C) was obtained in the two weeks prior to administration of the pre-intervention survey. The residents were made aware that while the proposed curriculum (intervention) was built into the mandatory academic half day curriculum, participation in the assessments (pre- and post-intervention surveys and potential interviews) would be on an elective basis. They were made aware that there would be no compensation or penalty for participation or lack thereof. They were reassured that performance evaluations would not be affected. Adequate time was given for questions. Participants consented to completion of all study surveys and provision of basic demographic data (program, gender and junior vs senior level of residency).
Pre-intervention Survey

Of the 25 eligible General Surgery residents, 25 (100%) consented to participate in the study. Names were given to Margaret Shiels, the administrative assistant for the research project. The names were then placed in random order and given a study number from 1-25. No other person involved in the study was given access to the master list.

In a subsequent academic half day session, dedicated time was given for completion of the pre-intervention survey (appendix A). Manila envelopes containing the pre-intervention surveys, identified by study number only, were handed out to the residents based on the randomized list of names and associated study numbers, which were marked clearly on the envelopes. Each resident was given 20 minutes to complete the survey and place it back in a sealed envelope. This amount of time was deemed adequate for all residents filling out the survey. Additional time was given to residents who arrived late to the session. Residents who were absent were alerted by a reminder email to all General Surgery residents and given specific instructions to report to the office of the administrative assistant, where they could fill out the survey at their earliest convenience.

Intervention - Professionalism Education Program

After completion of the pre-intervention survey, the following 6-month, 5-part Professionalism Education Program was implemented as a mandatory component of the General Surgery Academic program for all General Surgery residents:
Component 1. A ‘Defining Professionalism’ session with the Associate Dean of Professionalism, University of Manitoba, Dr. Samantha Kelleher

Component 2. Creation of a Code of Professionalism for residents in the General Surgery Residency Program, University of Manitoba, based on the results of the consultative session with Dr. Samantha Kelleher (component 1)

Component 3. Training in Crucial Conversations®. This training is meant to enhance outcomes in conversations where opinions vary, stakes are high, and emotions are strong.

Component 4. A Journal Club exploring the core principles of professionalism led by Dr. Samantha Kelleher, Associate Dean of Professionalism.

Component 5. A ‘Cinemeducation’ session where residents were required to watch movie clips incorporating many of the core principles of professionalism as they relate to healthcare professionals. The discussion was led by Dr. Samantha Kelleher, Associate Dean of Professionalism.

Component 1 - Defining Professionalism Session

Professionalism was defined by those consented to participate in the intervention. The session was led by Dr. Samantha Kelleher, Associate Dean of Professionalism, Max Rady College of Medicine, University of Manitoba. Dr. Kelleher provided historical context on the term professionalism as
it related to medicine and presented the code of professionalism from the adapted APTA pre-intervention survey (appendix A). The remainder of the session was largely resident driven. Each resident was asked to share their thoughts on the seven core principles, whether they felt the definition was complete, which core principles they felt were most and least important, and which core principle they had the most difficulty with. The session was given a time frame of two hours for development of a definition of Professionalism and discussion around core principles of professionalism. The end point of the session was to define professionalism as it related to the General Surgery residents at University of Manitoba for the 2015-2016 academic year.

Component 2 - Professionalism Tag

The second intervention in the Professionalism Education Program included the development of a ‘Code of Professionalism’ tag (figure 4). This tag was to be compatible with resident ID badges and to be worn as a daily reminder of professionalism as defined in Component one of the interventions. The front of the tag displayed a Venn diagram outlining the three components of professionalism, including behaviour, skills, and mindset. Behaviour was defined as “the way in which one acts or conducts oneself, especially toward others.” 156 Skill was defined as “the ability to do something well, or with expertise,” 157 and mindset was defined as “the established set of attitudes held by a person.” 158 The latter concept includes knowledge, attitude, intention, and disposition. The back of the tag included the seven core principles discussed with Dr. Kelleher, as derived from the APTA survey, as well as examples of professional behaviour specific to resident duties and responsibilities. These included:
• **Accountability**
  o Be on time
  o Be responsible
  o Teach residents and medical students

• **Altruism**
  o Consider patient safety the highest priority
  o Work as a team

• **Compassion/Caring**
  o Communicate effectively
  o THINK before you speak
  o Be respectful
  o Be aware of non-verbal communication
  o Encourage co-workers, peers, patients and staff

• **Excellence**
  o Be committed to life-long learning
  o Attend journal club
  o Challenge laziness
  o Get involved in research

• **Integrity**
  o Be honest
  o Be genuine
  o Follow through on commitments
  o Apologize when necessary

• **Professional Duty**
  o Be prepared for half day
  o Be on time
  o Know your role
  o Sign over fully, completely and routinely
  o Provide quality care
  o Delegate appropriately
  o Monitor language

• **Social Responsibility**
  o Seek to understand cultural differences
  o Get involved in health policy
  o Be an advocate
The tags were handed out at the General Surgery resident academic half day to all residents in attendance. The tag was explained and then discussed in detail by the residents, including edits and areas for improvement for subsequent iterations. Proposed changes included:

- Include more specific examples
- Focus on positives rather than negatives
- Change ‘monitor profanity’ to ‘monitor language’ to include a more global and general understanding of how we speak at work
- Create a second professionalism tag for staff with staff specific expectations of professional behavior

**Component 3 - Crucial Conversations® Training**

The third intervention included training in Crucial Conversations® for all General Surgery residents. VitalSmarts®, well known to the business world for their innovative Crucial Conversations® training, have adapted the course for the healthcare sector. This is meant to help healthcare professionals combat the pitfalls of communication that lead to inter-professional strife and put patient safety at risk. Their model of communication fosters open dialogue and teaches skills that create alignment and agreement when stakes are high, opinions vary, and significant emotion is attached. The skills employed by Crucial Conversations® include Get Unstuck, Start with Heart, Master my Stories, State my Path, Learn to Look, Make it Safe, Explore Others’ Paths, and Move to Action.
Get Unstuck involves recognizing we are all stuck in many different areas of life not achieving what we want. It teaches how to identify conversations as being crucial, including the three basic tenets of a Crucial Conversation® opposing opinions, strong emotions, and a high stakes outcome. Start with Heart helps people to identify their style of conflict and communication under stress, recognize their underlying motives, and how to stay focused on what matters to help get what you want, for yourself, for others, and for the specific situation. Master my Stories separates the concepts of fact vs story, and pushes people to ask themselves whether they are behaving like a victim, a villain, or someone who is helpless in the stories they are telling themselves about a situation. State my Path teaches how to share facts, tell your story in a non-confrontational manner, ask questions that help other involved individuals share their stories, and encourages creating a solution. Learn to Look teaches that we often miss or misinterpret early warning signs of conflict and signals to watch for in ourselves and the people around us. Make it Safe teaches the importance of finding a mutual goal, being respectful, learning to apologize, and learning how to avoid misunderstandings. Explore Others’ Paths involves learning how to help others set aside their default position in conflict to join in an effective dialogue. Move to Action involves learning how to end a difficult conversation well.

The Crucial Conversations® course was administered by a certified instructor over four weeks during July and August of 2015. Residents were seated in five table groups of four residents each. It was observed that residents most often chose to sit with close friends, and there was minimal table changing throughout the four-week course. There were four (four-hour) sessions, and attendees were required to attend ¾ session, with the last session being mandatory, in order to obtain a certificate of completion. Although residents did not receive favourable or
unfavourable evaluations based on attendance, they were made aware that the Crucial Conversations® training could be added to their resumes. Each week the residents were taught one or two new skills related to communication when opinions differ, emotions run high, and the outcome is important. They were given time to practice with each other and to demonstrate their newly learned skills in front of the other residents. Open dialogue and discussion were encouraged and elicited.

*Component 4 - Journal Club Discussion*

The fourth intervention included a journal club discussion of two academic papers about core principles of professionalism led by Dr. Kelleher. Hundreds of abstracts on different core principles of professionalism were reviewed. Each article summary or abstract was reviewed to assess the appropriateness for content related to the Professionalism Education Program as well as group discussion. The articles chosen directly addressed the question of ability to teach and learn professionalism, as well as pitfalls and difficulties related to accentuating professionalism education. Ultimately two articles were chosen to discuss. These articles were chosen by Dr. Rebecca Whitley and reviewed by Dr. Debrah Wirtzfeld, General Surgery Section Head, and Dr. Samantha Kelleher, prior to being sent to the residents.
The two articles chosen included:

---

**Academic Medicine**

*Issue: Volume 85(1), January 2010, pp 134-139*

*Copyright: © 2010 Association of American Medical Colleges*

*Publication Type: [Professionalism]*

*DOI: 10.1097/ACM.0b013e3181c47b25*

*ISSN: 1040-2446*

*Accession: 00018888-201001000-00036*

---

**Observation, Reflection, and Reinforcement: Surgery Faculty Members' and Residents' Perceptions of How They Learned Professionalism**

Park, Jason MD, MEd; Woodrow, Sarah I. MD, MEd; Reznick, Richard K. MD, MEd; Beales, Jennifer MA; MacRae, Helen M. MD, MA

*Author Information*

Dr. Park at the time of this study, was research fellow in surgical education, Department of Surgery and the Wilson Centre for Research in Education, University of Toronto, Toronto, Ontario, Canada, and is assistant professor, Department of Surgery, University of Manitoba, Winnipeg, Manitoba, Canada.

Dr. Woodrow at the time of this study, was a fellow in surgical education, Department of Surgery and the Wilson Centre for Research in Education, University of Toronto, Toronto, Ontario, Canada, and is clinical fellow, Department of Neurological Surgery, University of Miami, Miami, Florida.

Dr. Reznick is R.S. McLaughlin Professor and Chair, Department of Surgery, University of Toronto, Toronto, Ontario, Canada.

Ms. Beales is a doctoral candidate, Leslie Dan Faculty of Pharmacy, University of Toronto, Toronto, Ontario, Canada.

Dr. MacRae is associate professor and D.H. Gales Director of the Surgical Skills Centre, Department of Surgery, University of Toronto, Toronto, Ontario, Canada.

Please see the end of this article for information about the authors.

Correspondence should be addressed to Dr. Park, St. Boniface General Hospital, 409 Taché Avenue, Room Z-303B, Winnipeg, MB R2H 2A6, Canada; telephone: (204) 237-2674; fax: (204) 237-3409; e-mail: jpark@sbgh.mb.ca.

---

The authors set out to understand how the “core competencies of professionalism are taught in the academic environment” through 34 interviews of surgery residents and faculty members at two institutions in Toronto, Canada. The data was analyzed using a grounded theory approach and the authors concluded, based on their results, that intentional role modeling, self-examination, and timely and effective evaluation improved an understanding of and modeling of professional behaviour.
Lucey and Souba posited that rather than approaching professionalism in the medical field as a technical problem, it is better approached as a “complex adaptive challenge requiring a new type of learning in medical professionals.” They suggest that lapses in professionalism should be approached as a type of medical error in order for individuals to understand and work out solutions for improving professional behaviour. They suggest six new assumptions in discussions to guide the improvement of professionalism in an institution. These new assumptions include the idea that professionalism is multidimensional, that professional lapses can occur in individuals who are considered professional, and that challenges in professionalism occur frequently, and can be anticipated. Additionally, they suggest that lapses be dealt with in a coaching based manner, reserving sanctions for those who fail to respond to coaching, that changes in healthcare systems can contribute and in fact increase lapses in professionalism, and that governing bodies must support and reinforce professional behaviour.
The above articles were chosen for their thoughtful and provocative conclusions and discussions. The room was set up with chairs in a circle to facilitate group discussion and improve interaction. The session began with a brief summation of both articles and was subsequently opened up for discussion amongst the residents.

**Component 5- ‘Cinemeducation’ Session**

‘Cinemeducation’ refers to the use of film in medical education.\(^\text{173}\) It has been used in many areas of medicine. Film clips capture the attention of the learner, engage their emotions, and create lasting and powerful pictures associated with medical principles.\(^\text{174}\) Using film in education sessions is time effective, and provides “emotionally engaging experiences for ... residents.”\(^\text{175}\)

The following three film scripts were chosen for their powerful depiction of unprofessionalism in a surgical setting: Wit, Malice, and Grey’s Anatomy. Dr. Samantha Kelleher, the Associate Dean of Professionalism at the University of Manitoba, Max Rady College of Medicine, suggested the film Malice as she had previous experience with cinemeducation sessions that utilized clips from this film. Wit is a film that is often cited in research related to cinemeducation sessions as being a great discussion starter with invaluable learning points. Perhaps the most well-known to the general public, Grey’s Anatomy episodes often deal with lapses in professionalism between colleagues, but also with regards to patients. The specific story line chosen dealt with the latter.
1. *Wit* (figure 5) is a film about a well-respected English literature professor dealing with terminal ovarian cancer. The residents were shown multiple 2-3-minute clips of interactions between Vivian, the English Literature professor, and the chief surgical resident or surgical team on rounds. The chief surgical resident uses medical jargon to explain her cancer, leaves her lying exposed on the examining table with the door open, pulls her gown up on rounds without her permission, cuts off other residents making them look incompetent, and continues to perform CPR, despite being provided with the information that she is DNR (do not resuscitate). His many negative and unprofessional interactions with the patient, the nurses, and his surgical colleagues provided many examples of behaviours, the lack of skills and the unprofessional mindset that surgical residents may engage in or encounter on a daily basis.

2. *Malice* (figure 5) is a film about a con artist and an arrogant and corrupt surgeon who devise a plan to make money by performing an unnecessary and irreversible surgical procedure.

Two film clips were chosen including the depiction of the surgeon bullying the OR team into removing an ovary unnecessarily and a scene where the surgeon is ranting to the screen about how he is ‘God’, and no one can touch him. These specific scenes were chosen to initiate a discussion about the power that medical professionals, particularly surgeons, are given and how professionalism issues arise in how they wield their power with patients and the other members of the healthcare team.
3. Grey’s Anatomy Season 6, Episode 8: Invest in Love follows the story of a young boy with a terminal illness whose parents give a very generous donation to the hospital expecting it to motivate the pediatric surgeon to operate on their son even though it is an unsafe and futile treatment option. Fourteen minutes of clips incorporating the above storyline were screened to the residents initiating a discussion about surgical ethics, accepting gifts from patients, and how forming attachments with patients can make surgical decision-making very difficult and confusing.

Prior to beginning the session, the concept of cinemeducation was explained, the timeline of the session was explained, and time was given for questions. The moderator was clear that there were no wrong answers, and that the quality of the session would be contingent upon residents participating. Time was given after each chosen film or TV clip for the residents to discuss their thoughts and opinions on what they had watched. When discussion was lacking, specific questions were asked by the moderator relating to each film/TV show to initiate discussion. Questions included:

- What did you find inappropriate about this interaction?
- How did you feel about the team dynamics?
- Do you think boundaries were crossed?
- Where does this type of behaviour come from?
- Did you find any of the attitudes portrayed disrespectful?
- Was there a prevailing paternalistic attitude?
- How would your behaviour be different in the same situation?
- Are we good at our jobs?
Post-intervention Survey Administration

Upon completion of the six-month, five-component Professionalism Education Program, the same previously validated questionnaire was administered to each General Surgery resident who had consented to the study. This was done in a structured fashion at the beginning of the General Surgery resident academic half day teaching session in the beginning of December 2015.

Manila envelopes containing the post-intervention surveys were handed out to the residents. These were identified by study number only. Each resident was given 20 minutes to complete the survey and place it back into a sealed envelope. This amount of time was adequate for all residents filling out the survey. Additional time was given to residents who arrived late to the session. Again, residents who were absent from the session were alerted by a reminder email to all General Surgery residents and given specific instructions to report to the office of the administrative assistant, where they could fill out the survey at their earliest convenience. Weekly emails were sent out to the General Surgery residents until the end of January 2016, reminding the residents to complete their post intervention surveys.

SurveyMonkey® Administration

The additional SurveyMonkey® link (appendix B) was sent by email to each General Surgery resident in January of 2016. This survey included additional questions about level of training (junior or
senior level), gender, and the specific interventions employed in the Professionalism Education Program. The residents were asked to detail a situation in which they had used principles or strategies learned in the Professionalism Education Program. The situation could occur at work, at home, or in any other capacity in life. The residents were asked to discuss when and where the situation occurred and to reflect on why they felt it occurred. They were asked which skills or tools they had been employed and asked to rank the components of the intervention from most to least helpful. They were asked to reflect on whether the Professionalism Education Program had improved their sense of professional behaviour and identity. Weekly emails were sent to the General Surgery residents throughout January and February reminding them to complete their post intervention survey and their SurveyMonkey®.

**Structured Interviews**

In order to increase the robustness of our qualitative data and analysis, structured interviews were undertaken with volunteer study participants. Questions regarding principles of professionalism, whether the residents felt that professionalism could be taught, and/or learned, and specific components of the Professionalism Education Program were formulated (appendix D).

An email was sent out to all the General Surgery residents in March 2016 asking for volunteers to participate in a 30-minute structured interview session with Dr. Kelleher, the Associate Dean of Professionalism at the University of Manitoba, Max Rady College of Medicine. Participation in this portion of the study was voluntary, and a $10 Starbucks® card was offered to anyone willing to participate.
The interviews took place between the end of April and beginning of May 2016 in Dr. Kelleher’s office at the Bannatyne Campus, Brodie Centre, Max Rady College of Medicine, University of Manitoba. Each interview was approximately 30 minutes in length. 15 questions were asked in the same order to each of the 4 (4/26, 15%) participating residents (appendix D). They were asked if they had any last thoughts to add and were thanked for their participation. They were asked to refrain from sharing the questions with other possible participants and ushered out of the office. The residents were instructed to present to the office of the project administrative assistant to collect their $10 Starbucks® card in order to maintain anonymity.

For both the SurveyMonkey® survey results and the structured interviews, thematic analysis was undertaken. Thematic analysis is a method for identifying, analyzing, and reporting patterns (themes) within data, helping to organize and describe data sets in detail. It allows the researcher to note the frequency of a theme and compare it with an analysis of the entire project. It provides a comprehensive process identifying numerous cross-references between evolving themes and the entire data. When a theme was identified, it was rechecked against all the data for that survey for authenticity. This was undertaken with each survey separately to ensure all common themes were identified.

Statistical Analysis

The pre- and post-intervention survey responses were collected and given to the Centre for Healthcare Innovation (CHI) for statistical analysis by Loring Chuchmach.
Results

Demographics

No demographic data was collected in the pre- or post-intervention surveys.

Demographic data collected from the SurveyMonkey© survey responses included 0/3 (0%) male juniors, 6/7 (86%) female juniors, 4/5 (80%) male seniors, and 2/11 (18%) female seniors.

Response Rates

Of 26 potential General Surgery residents available to participate in the study, all 26/26 (100%) consented to participate in the pre- and post-intervention surveys. A total of 24/26 (92%) pre-intervention surveys, 16/26 (62%) post intervention surveys, and 12/26 (46%) survey monkey links were collected over the 6-month study. Reasons for non-response included lack of resident attendance secondary to vacation, elective time, or withdrawal from the study. 4/26 (15%) residents volunteered to participate in the structured interview.

Statistical Analysis: Professionalism Survey

Seven core value scores (accountability, altruism, compassion/caring, excellence, integrity, professional duty and social responsibility) were recorded by taking the mean score from the sub-items within each core value category at the time of pre- and post-intervention survey (time 1 and time 2). Missing data values were present in 2/24 (8%) participant surveys. Participant # 2 was missing 1/7 of the Professional Duty sub items at the time of the pre-intervention survey. Participant # 14 was missing 1/9 sub items in the Accountability subgroup, 6/7 from the Care/Compassion sub group, 4/11 in the Integrity sub group at the time of the pre-
intervention survey. The analysis computed the mean Integrity score, the mean accountability score but set the score for Care/Compassion to ‘missing.’ The missing data sets were included in the data analysis as very few items were missing.

*Factor Analysis*

Principle components factor analyses were run on the sub-items of each core value.

**Reliability of Sub-Items Within Each Core Value**

Table 1 (table 1) summarizes the reliability of the sub-items within each Core Value of Professionalism; that is the questions within each of the 7 core categories that the residents were asked to answer on a scale of 1-5. Using ‘test-retest’ reliability\textsuperscript{182}, the scores from the pre- and post-intervention surveys were correlated to evaluate the survey for stability over time. The core value of accountability included 9 questions or ‘items’ and had a reliability score ($\alpha$) of .928. Altruism garnered a score of .828, compassion/caring a score of .890, and excellence a score of .915. The reliability score for integrity was .926, for professional duty was .807, and .921 for social responsibility. These results showed excellent reliability between the pre- and post-intervention surveys.

For each of accountability, altruism and compassion/caring, one factor was extracted, which is to say the sub-items for each of these core values loaded highly with each other. For the core values of integrity and excellence, more than 1 factor was extracted, however the loadings were .3 and above for the items on the first factor which do lend support to one factor. Professional duty items all loaded strongly with each other with the exception of item 4
which loaded below .3. Even so, when reliability analyses of these items were conducted (see appendix H) the removal of item 4 did not improve the alpha of these items to any practical degree (.807 increased to .812 with # 4 removed). The social responsibility sub-items 1 and 2 were the only ones that showed low factor loading with the other items. And while they were below .3, the reliability of these items was very high at .921 (appendix J), and removal of items 1 and 2 only slightly improved this to .937.

**Missing Versus Non-Missing Group Baseline Comparisons**

Table 2 (table 2) summarizes the differences between participants with and without missing post-intervention/time 2 data assessed with independent samples t-tests. There were no significant differences between these two groups.

**Pre-and Post-intervention Changes in Self-Perceptions of Professionalism**

Table 3 (table 3) outlines differences across the mean core value scores from pre-intervention to post-intervention. For all core values the mean score increased from pre-intervention to post-intervention, indicating an improvement in self-perceptions of professionalism following the implementation of the Professionalism Education Program. Statistically significant positive changes in Social Responsibility were seen (p-value of 0.04 [0.29-0.13]), with values showing a trend towards statistical significance in the core values of Integrity (p-value of 0.08 [0.21-0.11]), Professional Duty (p-value of 0.11 [0.15 to 0.09]), and Excellence (p-value of 0.32 [0.16 to 0.15]). No statistically significant change was seen in the areas of Accountability or Altruism.
Qualitative Analysis

Survey Monkey® Survey

12/26 (46%) responses were collected from December 2, 2015 until April 18, 2016. Demographic data was collected for gender, residency level, and distinction was made between whether the resident was junior or senior level (figure 6). Submitted responses included zero male juniors (0/3, 0%), six female juniors (6/7, 86%), four male seniors (4/5, 80%), and two female seniors (2/11, 18%).

In the SurveyMonkey® surveys, encounters surrounding issues of professionalism arose with a co-resident in a different specialty (4/12, 33%), a co resident in the same specialty (3/12, 25%), a spouse/partner (2/12, 17%), nursing staff (2/12, 17%), or an attending physician (1/12, 8%) (figure 7). Encounters surrounding issues of professionalism were most common on call, in the OR, during rounds, on the ward, in the office of an attending physician, while scheduling call shifts, or at home.

Issues in Professionalism

Gender (Appendix E)

Data analysis revealed a difference in attitudes towards Professionalism with regards to gender. Female respondents were more inclined to feel they had a better understanding of professionalism in general, how their behaviour affected colleagues, and the need for education surrounding the core principles of Professionalism. Male respondents were
more likely to feel that their behaviour had not changed, that a PEP administered within a residency training programs was dilatory, and unlikely to create lasting change.

*Common Themes (Appendix E)*

Common themes identified during thematic analysis surrounded lapses in professionalism. These lapses included: misinformation, expectations (unclear or differing), poor communication and misunderstandings, stress, frustration, burn-out, time constraints, poor sense of boundaries, assumptions or judgements, hierarchy, pride, power struggles, micromanagement, and passive aggression.

*Stand Alone Themes (Appendix E)*

"Off the Record" Discussions

An interesting theme that emerged in one of the responses included the issue of lapses in professionalism occurring in casual, social, or ‘off the record’ conversations in elevators, stairwells, or the coffee line.

Multiple Conversations

Another interesting theme that emerged was the progression of professional lapses that occurred over multiple conversations and settings, suggesting a correlational effect between number of events and the degree of professional lapse/conflict down the line.
Hierarchy and Power Struggles

One resident wrote that they encountered conflict with another resident over team management. They felt the other resident wanted to ‘act more senior’ creating a power struggle between them for ward management and OR time.

Another resident wrote that after witnessing a critical incident with a co-resident, they recognized the need to approach the other person in order to have an ‘honest discussion about what happened and how things could have been dealt with differently.’ They recognized that although the conversation might be awkward, it was necessary for patient safety, for the resident to move forward, and for team cohesion.

Finally, a resident wrote that after multiple arguments with a specialty service, hoping to engage their help for expert advice on patient care, they were able to calmly and effectively advocate for the patient. They wrote, “Usually [you] are able to find common ground with most coworkers in hospital when bringing it back to focus on the patient.”

Boundaries

Another resident wrote that they had a conflict with a neighbor over some property damage while the neighbor was having work done in their yard. It was the second incident and the resident described themselves as being ‘livid’ wanting to go over and demand an apology and restitution.
**Suggestions for Future Curriculum**

Residents were asked to suggest any tools or resources that could have helped them with their particular professionalism situations. Five suggestions, including education in conflict resolution, counseling, personal coaching, mediation, and support, were listed and residents were asked to check any and all that would have been helpful. A comment box was placed for any additional suggestions. A conflict resolution course was checked most frequently (6/12, 50%) followed by support (5/12, 42%), personal coaching (4/12, 33%), and a tie between counseling and mediation (2/12, 17%). Two comments were made: one regarding the use of colleague support/debriefing and the utilization of components of Crucial Conversations®, and the other regarding the feeling that nursing staff should receive also receive professionalism education (figure 8).

**Curriculum Component Ranking**

Residents were also asked to rank the components of the Professionalism Education Program in order of having the most to least impact. Six residents (6/12, 50%) felt that the Crucial Conversations® course had the most impact, two residents each (2/12, 17%) felt that the defining professionalism, cinemeducation, and journal club discussion had the most impact. Least impactful was felt to be the cinemeducation session (5/12, 42%), followed by the Professionalism Tag® (3/12, 25%), and a tie between Crucial Conversations® and the journal club discussion (2/12, 17%) (figure 9).
**Self-Perceptions of Professionalism**

The residents were also asked to discuss how their perception of their own professionalism had changed in the preceding eight months. A similar statement made by several residents included the idea that while they didn't feel they had changed with respect to becoming more professional, they were more aware of what was appropriate or inappropriate, and they felt more aware of how their actions were perceived by others. One resident wrote “I think my perception has not changed a lot, but I think my awareness to what is professional and what is not has changed.”

Other common themes included an increase of self-awareness, a further understanding of unspoken topics (referred to as ‘hidden curriculum’ in the literature), and an ability to reflect on what professionalism actually is.

**Increased Self-Awareness**

Several residents wrote about feeling an improvement in their understanding of professionalism:

‘I am more aware of how my actions are perceived.’

‘It has made me reflect on what I think professionalism is, and what I feel I have both positively and negatively contributed to my work’s professional environment.’

59
'I think my perception has not changed a lot, but I think my awareness to what is professional and what is not has changed. I also think the way I deal with situations where people are unprofessional has changed.'\textsuperscript{190}

‘Awareness of its presence or lack thereof has increased.’\textsuperscript{191}

‘I would say that my self-assessment of professionalism has not changed in an objective sense... while I haven’t improved as a person, I have probably improved as a colleague.’\textsuperscript{192}

\textit{Changes in Behaviour}

Several residents felt that the Professionalism Education Program pushed them to more professional behaviour:

‘[It] encouraged me to be more on time and prepared for sessions.’\textsuperscript{193}

‘I remember the discussion on what would be considered to be professional behaviour; attending activities on time, not gossiping about colleagues, attendings and other services etc, being polite with others even if they were aggressive, documenting events if needed, using proper channels of communication etc.’\textsuperscript{194}

‘I am better equipped to interact with others and communicate in a non-confrontational professional language...’\textsuperscript{195}
Professionalism: Innate or Learned

A further theme that emerged in the responses was the innateness of professional behaviour and whether professionalism education should be included in residency programs:

‘I think it has become obvious that it is not something that is innate but rather something that is developed, and the residency program must facilitate this.’196

‘It is a dynamic concept that requires reflection and self-awareness and an understanding of where others may come from, and these are the things that have helped me understand our construction of professionalism.’197

Personal versus Professional Identity

One response involving the concept of personal identity being separate from professional identity was noted. The resident wrote:

‘I would say that my self-assessment of professionalism has not changed in an objective sense, but I am better equipped to interact with others and communicate in a non-confrontational professional language; while I haven’t improved as a person, I have probably improved as a colleague.’198
Lack of Professionalism as Personal Identity

Some individuals noted that they observed a discordance between professional and personal identity, that some professionals actually see their lack of professionalism as part of their ‘professional’ identity. One resident wrote,

‘I have come to a better understanding that some “professionals” see their lack of professionalism as professional.’

Thematic Analysis of SurveyMonkey® Surveys

For the purposes of thematic analysis, the 12 numbered SurveyMonkey® surveys were read and summarized in detail as follows:

#1

A male senior described a situation that occurred with nursing staff at The Children’s Hospital. The nursing staff refused to perform what he felt were specific nursing duties and told him it was his responsibility to perform these same duties. He felt that support would have improved the situation and that the nursing staff should receive more professionalism education. He felt that Crucial Conversations®, cinemeducation session, and Professionalism Tag were the most impactful, while the Defining Professionalism session, and journal club discussion were less helpful.
He did not feel that any components of the Professionalism Education Program be integrated into the half-day curriculum. He wrote that if residents didn’t have an understanding of the concept of professionalism by the time they were in residency, the failure had occurred at an earlier point and they would likely not learn how to behave more professionally. He felt that he had come to a better understanding that some professionals view their lack of professionalism as professional.

#2

A male senior described a situation that occurred with a co-resident in the same program during rounds at work. He felt the situation arose related to issues of hierarchy and pride and was frustrated by his co-worker having strong opinions about an issue and the fact that they wouldn’t listen to his opinion. He felt that counseling and personal coaching would help future issues.

He felt that Crucial Conversations, the Professionalism Tag, and the Defining Professionalism session were the most impactful, while the cinemeducation session and the journal club discussion were the least helpful components of the Professionalism Education Program. He did not feel that any of the components should be continued in the half-day curriculum and did not feel that his professionalism had improved much as a result of the program.
A male senior wrote about an evolving situation that occurred multiple times at work with multiple attending surgeons culminating in a long discussion in the office. This resident felt misunderstood about an approach to an ongoing problem, namely because the surgeons didn't have all of the relevant information about the situation. In the office of the attending surgeon, using some of the skills he'd learned in Crucial Conversations®, he was able to share his perspective, share that he felt he was being portrayed unfairly to other staff, and as a result had been unfairly and inaccurately characterized by several other staff members. He felt that a conflict resolution course and support would have helped the situation further.

He felt that Crucial Conversations®, the journal club discussion, and the Defining Professionalism session were the most helpful part of the Professionalism Education Program and ranked the Professionalism Tag and the cinemeducation session as less helpful. He did comment that he had been absent for the cinemeducation session which is why it was ranked the lowest, not because he felt it was unnecessary. He also felt that some components of the program be continued in the half-day curriculum, specifically Crucial Conversations® and the journal club discussion.

He wrote that his self-assessment of professionalism hadn’t objectively changed, but he felt better equipped to interact with his coworkers, and communicate in a non-confrontational manner, specifically using professional language. He wrote that while he hadn’t improved as a person, he thought he had improved as a colleague.
A female junior described an argument with another resident from a different specialty that occurred at work regarding patient care. She felt she was able to advocate for the patient effectively using her newly acquired Crucial Conversations® skills. She felt that it was most effective to find common ground when the focus was brought back to patient care and safety. She felt the situation occurred because of a discordance between resource utilization for patient safety versus for the benefit of society. She felt that further counseling and support would help with future similar situations.

She ranked the Defining Professionalism session, Crucial Conversations®, and cinema education sessions as being the most impactful, followed by the journal club discussion, and Professionalism Tag being the least effective. She also felt that the full program should be continued in the half-day curriculum for General Surgery residents. She wrote that as a result of the Professionalism Education Program, her interest in the presence or absence of professional behaviour had increased.

A female senior described a situation in which a critical incident took place with a fellow resident from a different specialty surrounding a medical error that put patient safety in jeopardy. She felt that after taking the course, she was less anxious about approaching the colleague to discuss the situation and how it could have been handled differently. She was careful to keep the mutual desire for work and patient safety as the future goal. She recognized only after taking Crucial Conversations® that difficult conversations are awkward for everyone
involved and that this recognition is a key factor in moving forward. She wrote that making the other person feel comfortable enough to be honest and keeping the focus on a main shared goal is the most important thing. She felt that she would be more comfortable having these types of discussions in the future.

She wrote that personal coaching and support would be helpful in similar situations. She ranked Crucial Conversations® as being most impactful, followed by the journal club discussion, the Defining Professionalism session, the Professionalism Tag, and lastly, the cinemeducation session. She wrote that some aspects of the Professionalism Education Program should be integrated into the half-day curriculum. She felt that particularly the Crucial Conversations® was important to continue offering, as well as resident self-reflection and self-improvement components. She felt that these 3 components would allow for improved resident insight into whether their behaviour was professional or unprofessional.

She wrote that her perception of professionalism hadn’t changed throughout the course, but that her awareness of professional and unprofessional behaviour had improved. She also felt that her ability to deal with situations where other people behaved in an unprofessional manner had improved.

#6

A female junior wrote that in an altercation with a colleague in the same specialty, the colleague intentionally misinterpreted the situation to an attending, altering the details in their favour. The junior resident recognized that this would have a negative impact on their
career as well as with the colleague. She approached the colleague and let them know their behaviour was unprofessional and could they discuss what happened so as to improve their future working relationship.

This resident felt that further courses and instruction in conflict resolution would be helpful for similar future events. She felt the Crucial Conversations® course was the most beneficial, followed by the Defining Professionalism session, the Professionalism Tag, the journal club discussion, and lastly, the cinemeducation session. She also felt that the program should be continued in the half day curriculum in the future. She wrote that the Professionalism Education Program helped her remember what was considered professional behaviour and cited the specific examples of being on time, not gossiping, being polite, even with aggressive people, and utilizing proper channels of communication.

#7

A female senior wrote that she had a conflict related to professionalism with her next-door neighbor over some property damage. She wrote that through reflection of the situation, recognizing consequences of angrily addressing the damage with the neighbor, and thinking about common goals, she was able to calmly discuss the situation. The main question she was able to ask herself was ‘what do I really want out of this?’ They were able to have an effective and friendly dialogue about how the damage had happened and the neighbor was very apologetic. Instead of making a next-door enemy and worsening an awkward situation, she was able to make a friend who often helps out with yard duties while she is on call. She cited
misunderstanding as the main reason for this professional conflict and felt that a conflict resolution course and personal coaching would have been helpful in the resolution.

She felt that the Crucial Conversations® course was the most impactful component of the Professionalism Education Program, while the professionalism tag was the least impactful. She felt that Crucial Conversations® training should be continued in the half day curriculum. She wrote that she has a deeper awareness of how her behaviour has both positively and negatively affected the culture of professionalism around her. She felt that the improvement of professional identity requires reflection and self-reflection.

#8

A female junior wrote that she had an issue with an OR nurse, who she felt was obstructive to learning opportunities. The resident wrote that this felt consistent with other nursing staff and although they made their opinions clear, she and the staff surgeon continued to operate. She was able to stay calm, refusing to engage this specific nurse in her frustration understanding that she had to maintain a collegial working relationship. The resident felt that frustration, burn out, time constraints, and the power struggle that comes with a hierarchical culture were the core issues contributing to this conflict. She felt the most helpful resource in this situation would have been a mediator. Interestingly, she did not mention whether the staff surgeon, who was present during the multiple conflicts, spoke up to mediate the situation.

She felt that the journal club discussion was the most impactful part of the Professionalism Education Program, and that the cinemeducation session was the least
impactful. She felt that the only some parts of the education program should be continued, more specifically the journal club discussion in a small group setting. She felt that the course encouraged her to be on time and prepared for teaching sessions.

#9

A female junior wrote that she was ‘snapped’ at by a resident in a different specialty regarding ‘micromanagement.’ She felt that because patient safety and care was her first priority, it was her responsibility to follow up on things. Instead of arguing and excusing her behaviour, she was able to apologize immediately recognizing that 4am was not a helpful or rational time to have that discussion. She was able to understand why the other resident was frustrated. She cited being able to ‘look at the big picture rather than listening to…primitive emotions to argue back.’ Interestingly the discussion took place in the stairwell as they were passing by each other in an ‘off the record’ manner. She cited stress, lack of communication, and unclear expectations as the fuel for the professional conflict and felt that a course in conflict resolution would have been helpful.

She felt that the Crucial Conversations® course was the most impactful, while the cinemeducation session was the least impactful. She felt the program should be continued in the half day curriculum and wrote that the principles incorporated in professional behaviour are not innate but need to be developed. She felt the residency programs were responsible to facilitate this development.
#10

A male senior wrote that the most recent professional conflict occurred with his spouse but declined to comment on the situation except that it involved his in-laws. He felt it occurred secondary to poor communication on his part and felt that a conflict resolution course would have been the most helpful resource in that situation. He cited Crucial Conversations® as being the most impactful, while the journal club discussion was the least impacting. He felt the program should be continued in the half day curriculum but did not feel his self-perception of professionalism had changed as a result of the program.

#11

A female junior wrote that she had a conflict with another resident in the same specialty over team management and OR opportunities. She felt there was a power struggle with the other resident. She cited differing expectations as the causative factor and felt that the most helpful resources for her situation would have included a course in conflict resolution, personal coaching, and mediation. She felt that the cinemeducation session was most impactful while the professionalism tag was the least impacting. She felt that some of the components should be continued in the half day curriculum and found the course ‘thorough’ and felt that it opened her eyes to ‘unspoken topics.’

#12

A female junior wrote that she had an issue with another surgical specialty about the appropriateness of an admission to their service. A compromise was struck with the resident from a different specialty whereby she would admit the patient but would transfer the patient to
the other service in the am after the OR. She felt that misinformation about the role of the trauma service was responsible for the lapse in professionalism and felt that support would have been the most helpful resource in her situation. She felt that the defining professionalism session was the most helpful, while the cinemeducation session was the least helpful. She felt that the program should be continued in half day, and that she was more aware of how her actions were perceived.
Discussion

Changes in Self-Perceptions of Professionalism

Of the seven core principles of professionalism, the only significant positive finding was in self-perceptions of social responsibility post introduction of the Professionalism Education Program. This may reflect residents not having had a great pre-intervention conceptualization or understanding of what this core principle encompasses. Thus, the Professional Education Program may have succeeded in educating the residents around issues of Social Responsibility. Alternatively, two of the subcomponents of Social Responsibility address the idea of leadership in surgery and collaboration with other health care professionals. These concepts were incorporated into the Professionalism Education Program, and explicitly discussed and practiced within the educational components. Discussion of Social Responsibility as a surgeon occurred within several components of the PEP including the Journal Club discussion, the cinemeducation session, and the defining components of professionalism session. This was a novel approach to professionalism curriculum. Traditionally this curriculum focused on autonomy, altruism, self-regulation, and competency, however in recent years medical trainees like their generational counterparts are increasingly concerned about social responsibility and accountability. Incorporating this component into the curriculum allowed room for discussion, reflection and internalization of the importance of Social Responsibility. These results suggest that the residents incorporated this teaching into their professional identity with regards to their Social Responsibility as a surgeon.
Though trends towards significant change were also seen in the areas of Integrity and Professional Development, there was no statistically significant change in any other component of Professionalism. Although there was also a trend towards significant change in the areas of Excellence, Integrity and Professional Duty, there was no change in the areas of Accountability, Altruism, or Compassion/Caring. Both global and individual factors are likely responsible. Globally, these results suggest that perhaps the tool used to measure self-perceptions of professionalism was in fact inadequate. Although previously validated by the APA, this tool may not have encompassed adequate evaluative ability of what the PEP set out to teach. The tool was perhaps too broad, and more focused questions may be required to detect a difference. Alternatively, the PEP may not have adequately educated the residents regarding the specific sub-components or sample indicators of the core attributes. For example, although it was discussed that Accountability was a core component of Professionalism, it was not explicitly defined or discussed in the group setting. Sample indicators referenced a ‘Code of Conduct’ and ‘accurate communication with patients and families,’ which were not discussed within the PEP. Not explicitly teaching and discussing these things could relate to a lack of understanding about the concepts, therefore leading to a lack of change in this area. Individual factors could include poor ability to self-reflect, low EI, and survey fatigue. Residents may have rated themselves highly pre-intervention, accounting for a lack of change post-intervention, or may have answered questions without adequately reading the sample indicators.
Response rates differed between male and female respondents. Female respondents described a better awareness of professionalism, improved self-awareness of unprofessional behaviour, and endorsed the need for formal Professionalism Education. Male respondents were more likely to feel that their behaviour had not changed, were unconvinced that the PEP had created lasting change, and felt that if formal Professionalism education was to be a requirement, it should be initiated in the first year of medical school and continued throughout training. These differences could be related to Emotional Intelligence.

Emotional Intelligence is “the capacity to be aware of, control, and express one’s emotions, and to handle interpersonal relationships judiciously and empathetically.” It is well documented in the literature, that females score higher than males in the areas of self-awareness, recognizing and managing emotion, and empathy. Extrapolating from the literature, the female respondents of this study could have had an increased self-awareness of their professional and unprofessional behaviours, were able to more readily recognize unprofessional behaviour, and engage with greater empathy in difficult interpersonal situations. These gender-based differences could account for the overall positive reception of the PEP, as well as the lack of significant change pre-vs post-intervention.

The concept of EI, specifically the need for a higher EI in rating self-perceptions of professionalism was discussed at length prior to employing the pre- and post-intervention surveys. Would residents with a lower Emotional Intelligence Quotient (EQ) rate themselves higher or lower than residents with a high EQ? Were individuals without an ability to deeply
self-reflect able to truly behave in a professional manner? As previously stated, emotional intelligence requires self-awareness, and the ability to recognize and manage emotion. The literature shows that individuals with a low EQ demonstrate poor self-awareness, and ability to recognize emotion. The literature also demonstrates poor correlation between self-reporting and performance measures, suggesting that those with a low EQ believe they have a high EQ, and those with a high EQ may self-report in an inaccurately negatively manner. Additionally, when the correlation between gender and EI was studied, gender was a significant predictor of self-estimated EI, showing male gender as having a higher correlation between measured and self-estimated scores. These studies suggest that female residents having a suggested higher EQ, may have self-scored themselves lower or higher pre- and post-intervention than an observed score would have been, and that male residents, although not quite as self-aware, likely scored themselves more accurately. Given that our General Surgery residency program was predominately female at the time of this study (18/26, 70%), this potential for inaccurate reporting of self-perceived professionalism could have skewed both the pre- and post-intervention survey results, resulting in skewed results. Male resident qualitative response rates were also low (4/26, 15%), accounting for potential skewed and inaccurate results.

Residency Level

Response rates also differed at the junior resident and senior resident level. Junior residents consistently communicated that the PEP made a difference in their self-perceptions of professionalism, and that not only should it be continued, but that it should be made mandatory.
as part of the academic curriculum. Several junior residents also cited an increased interest in the topic of Professionalism as a result of the PEP. Several senior residents identified they believed that some of the core principles of professionalism may be innate and therefore unlikely to be teachable, and that professionalism required the ability to self-reflect and therefore likely required a higher EQ. While the literature is clear about the ability of self-awareness and self-reflection being an essential part of the learning process, and therefore, a requirement for professional development, 214 215 216 these results demonstrate a certain amount of cynicism on the part of the more senior residents. This cynicism included the philosophy that residents could not improve in the area of professionalism, that curriculum around core components would not improve the culture of professionalism, or in fact that many of the residents were capable of self-reflection and therefore change.

A wealth of research exists on the topic of resident burnout and cynicism, including the increase in both as residents progressed through their training.217 218 219 220 One study also revealed that males had significantly higher cynicism scores than females.27 Extrapolating from this research, senior resident responses would be significantly more cynical due to their progression in training, as well as their predominantly male gender. Junior resident responses could reflect less cynicism and burnout, and therefore endorse more positivity about the PEP and further curriculum development.
**Core Components of Professionalism**

*Accountability*

Accountability as a core principle of professionalism is explicitly discussed and taught in medical school, and enforced in residency.\(^{221}\)\(^{222}\)\(^{223}\) Often discussed within medical school lectures on professionalism is the concept of accountability and responsibility carried within the ‘privilege of our profession.’\(^{224}\) One study discusses graduates’ competencies, and the need for practices to be shaped by the health and social needs of the local, national and even international communities in which they serve.\(^{225}\) This same study urges medical schools to revisit their curricula regarding professional development and in particular, the concept of accountability in practice.

In response to this push towards accountability, the International Federation of Medical Students’ Association (IFMSA), in conjunction with the Training for Health Equity Network (THEnet), created a toolkit for medical students, worldwide, which defines accountability and the role medical students play, provides a tool for students to measure levels of accountability in their own schools, and gives suggestions for how to take action and improve accountability around them.\(^{226}\) This manual was put out in response to the World Health Organization (WHO) statement regarding accountability in the profession of medicine, and the follow up taskforces centred around human resources for health.\(^{227}\) The specific concept of accountability and social accountability, as it relates to professionalism and professional development, has become very important topic for healthcare learners today. This interest and
as a result, the explicit teaching and enforcement of accountability, has likely led to a better understanding and ability to reflect on individual behaviour in this area.

This study did not demonstrate any statistically significant change in the area of accountability. Within the General Surgery program at the University of Manitoba, teaching around the concept of accountability involves PGME core curriculum assignments, and midpoint and end of rotation evaluations. These evaluations include discussion points regarding taking responsibility, team dynamics, punctuality, response to input, and feedback from attending surgeons. Great importance is also placed on recognizing and disclosing mistakes, and follow-through regarding the obligations and requirements of the residency program (ie: call requirements, participation in research projects, and attendance at academic sessions, journal club and rounds). Evaluation encourages and enforces accountability. For these reasons, accountability was not a novel idea to the participants of this study. They likely encompassed a good understanding of the competency pre-intervention and thus did not demonstrate statistically significant change in the post-intervention.

**Altruism**

Altruism as a core component demonstrated no significant change between the pre- and post-intervention surveys. The concept of altruism was extensively discussed and disagreed upon during the journal club and cinemeducation portion of the PEP. Several senior residents felt that there was no such thing as a pure or true altruistic act, and as such, altruism was difficult to understand, discuss, measure, and impossible to learn. The three senior residents who felt very strongly about this issue argued aggressively with the junior residents who disagreed with
them and the discussion became quite heated. These discussions may have influenced how residents answered the post-intervention surveys as well as the SurveyMonkey® survey and potentially the interviews. These discussions could have influenced junior residents’ perceptions of altruism and whether they felt free to answer without bias in the post-intervention survey, SurveyMonkey® survey and interview. While there was likely no element of intimidation, as the surveys were anonymous, the aggressive and confidently spoken opinions of the few senior residents who disagreed with the concept of true altruism, may have swayed other residents to questions what they believed and thought about the subject, causing them to answer differently than they would have had the discussion not happened.

Our result mirror the evidence in the literature. Altruism distinguishes the profession of medicine from a craft or a trade in that the profession is devoted to the public good. While the concept of altruism was once felt to be the hallmark of professionalism the idea now seems to have taken a back seat to other core principles. Several studies chronicle learners ranking altruism as second and third to last in importance in a long list of professional attributes. Instead, learners seemed to fear it, worried they would be taken advantage of. One study uncovered the fact that in general, the students did not consider altruism as essential to the role of a doctor and instead felt it was going ‘above and beyond’ duty. This same paper concluded that there needed to be a shift away from the traditional understanding of altruism, and instead a focus on ‘pro-social behaviour;’ and a concept which places importance on action without promoting self-sacrifice.
Compassion/Caring

No statistically significant change was seen in the post-intervention survey answers within the core components of Compassion and Caring. In the early 20th century, the profession of medicine increasingly focused on scientific rigor with a new emphasis on evidence-based medicine being the gold standard. This shift to scientific excellence has led to a reduction in the ‘professional ethos of caring’ previously inherent in the profession. For early learners especially, patients are both recipients of care and ‘learning tools’ which creates a potential fracture in the learners sense of altruism and compassion and therefore professionalism. A learner walks into a patient room, identifies them self as a learner, and the patient graciously agrees to donate their time, story, disease process, and future health into the hands of that learner. To the learner, the patient is often viewed as a ‘tool,’ a means of learning, evaluation and thus, a means to an end- becoming a physician. This can shift the sense of professional identity from altruism and compassion, to duty and indifference. This attitude of duty and indifference could account for the lack of change in residents’ self-perceptions of compassion and caring.

Another reason for the lack of change in self-perception of compassion and caring could be related to compassion fatigue and burnout. The literature would suggest the rise of compassion fatigue, burnout and the new term, ‘moral injury’ as it relates to lack of compassion, lack of empathy, poor bedside manner, and medical mistakes. One study revealed that 40% of surgical residents met criteria for burnout, and that being in the first year of residency was a significant risk factor for burnout. There was no breakdown of junior residency distinction; the grouping contained only first and second year residents, whereas
senior resident grouping contained 3rd, 4th and 5th year residents. Given a 60% (6/10) response rate for junior residents (vs a 38% [6/16] response rate within the senior resident grouping), and a higher burnout rate for first year residents, a skew towards insignificant change within the core component of compassion/caring due to higher rates of compassion fatigue and burnout are possible.

**Excellence, Integrity and Professional Duty**

A statistically significant difference was not noted within the components of Excellence, Integrity and Professional Duty, the results did show a trend towards improved self-perception in each area from pre- to post-intervention. Great emphasis is placed, both in medical school and residency, on being a ‘life-long learner.’

The importance of constantly assessing self and work, building and keeping current with knowledge, and working to be competent and confident is stressed throughout the learning and training process, and even into being a practicing physician. At the University of Manitoba, this ethos manifests itself in exams, tutorials on ethics and integrity, core curriculum sessions, promoting evidenced based medicine, academic teaching sessions, research day participation, CME credits for practicing physicians for attending workshops, conferences and lectures, and through requiring membership to the College of Physicians and Surgeons of Manitoba (CPSM). While these things are encouraged, promoted, and required as a part of residency training, many of the subpoints for Excellence, Integrity and Professional Duty were explicitly taught and discussed as a part of Crucial Conversations®, and the cinemeducation component and journal club sessions. While the components may have been understood prior to the PEP, this explicit teaching and
discussion could have contributed to a heightened awareness, and therefore slightly improved self-perceptions in each area.

*Quantitative Analysis*

The previously validated pre- and post-intervention tool encompassed the seven core components of professionalism. Each component was defined and a set of sample indicators corresponding to each component was formulated as a statement with a corresponding standard 5-point likert scale. Each participant was asked to rate themselves from 1-5 (strongly disagree, disagree, neither agree nor disagree, agree, and strongly agree) for each sub item.

The data was analyzed using a linear mixed model approach to compare the pre-post scale scores (see Table 3. Pre-Post Change Comparisons). Similar to the paired t-test, the linear mixed model regression offers flexibility to address any missing data in order to maximize data use (using estimation to avoid losing missing data points). This demonstrates change from pre- to post-intervention, and whether or not this change was significant.

When analyzing the data, the question of statistical significance with regards to binary vs ordinal variables was discussed. Our study showed statistical significance in one out of seven core components. Would the study have shown greater statistical significance if instead of ordinal variables (5-point likert scale), we had used binary (yes/no) variables?
The debate regarding the use of ordinal vs binary variable within survey research is longstanding. Likert scales primarily capture direction (either positive or negative) and secondarily, but much less so, they capture the level of agreement. When using a binary (yes/no) scale, direction is explicitly documented and not confused by intensity of agreement or disagreement which is thought to be a reflection of response style rather than the strength of belief in the statement. Consensus amongst many researchers has been that binary variable studies perform better than ordinal ones in the area of ease of administration, and just as well as ordinal ones with regards stability, validity and reliability. Some even believe there is a potential for even greater statistical significance as a result of the lack of confounding data due to response style.

When this is done after conclusion of data gathering, it is called parsing data. Parsing data converts one string of data into a different type of data. It is referred to as dichotomization (transformation of continuous outcome data to binary data). Although common, it is thought to be harmful with regards to statistical estimation and hypothesis testing and could mask cut-off scores that could provide greater accuracy to the research project.

Prior studies have suggested that having dichotomous categories (collapsing data) makes interpretation of data simpler and more clearly identify trends while not affecting reliability. It is also felt to minimize response ambiguity, thus creating a more consistent response category set and therefore a clear distinction between yes/no or agree/disagree. While likert-scale response categories provide the possibility of a smoother distribution of
responses, they can also obscure the feelings or intentions of the respondent, creating ambiguity. However, Grimbeek et al go on to say that response categories be retained (not collapsed) unless there is good reason for them to be collapsed so as to avoid a loss of valuable information due to decreased variability and skewing of the data.

If, at the outset of the project, instead of a 5-point likert scale we had used binary (yes/no) variables, the statistical approach would shift from comparing mean change to comparing proportions; that is, comparing the proportions at pre- vs post- intervention for each dichotomized variable pair. A McNemar test would have to be used in this situation for the purposes of testing if the proportions of two dichotomous variables are equal in the population. As discussed above, this may have shown greater statistical significance.

Future research could include changing the pre- and post-intervention surveys to include binary (yes/no) variables for each sub item and compare the results with this study. This should be done at the outset of the project so as not to harm statistical estimation and disregard valuable data. This subsequent study could then be compared to the current study to assess the difference in statistical significance in core components of professionalism between pre- and post-intervention. If low statistical significance is seen when using non-binary (or ordinal) data, but high statistical significance is seen with binary data, a potential disconnect could be noted with regards to what was being measured by each type of variable.

As with all research, the question of statistical significance and clinical significance arises. Many papers citing statistical significance, which is the reliability of the study results, are
often interpreted to be clinically significant, which is the impact that the study has on clinical practice.\textsuperscript{283} Significance (which is often dependent on sample size) does not always equal importance. Lefort, in his paper on statistical and clinical significance, suggests that the clinical significance should reflect “the extent of change, whether the change makes a real difference to subject lives, how long the effects last, consumer acceptability, cost-effectiveness, and ease of implementation.”\textsuperscript{284} In many cases, reporting effect size (strength of relationship between two variables) demonstrates greater use and meaning.\textsuperscript{285} To determine effect size with regards to this study, future research could include a control group to provide an indication of effect size which could demonstrate clinical significance.

\textit{The Addition of Qualitative Analysis}

Recognizing the potential limitations of quantitative analysis in the area of self-perceptions of professionalism, the qualitative portion of the study was devised, as discussed within the limitations section. Although the pre- and post-intervention survey results did demonstrate a shift in self-perceptions of professionalism, they did not allow for in-depth insight into residents’ thoughts, feelings or perceived behavioural changes. Obtaining these in-depth insights could be achieved through qualitative surveys and interviews, allowing for time and freedom to write down thoughts, feelings, perceptions, and specific examples of professional issues they faced on a daily basis. Thematic analysis of the data collected from the SurveyMonkey\textsuperscript{\textregistered} responses and interviews provided a better understanding of what the residents thought and felt regarding not just the idea of Professionalism, but their perceptions of
their own Professionalism, and how it might have shifted, changed, or improved in response to the PEP.

It has been suggested that emotional intelligence is the most important variable influencing professional success and leadership. Closed-ended questions, such as those incorporated within the pre- and post-intervention surveys, rarely engage people. Alternately, asking open-ended questions allows the respondent scope to respond by choosing their narrative and hopefully giving insight into what is important to them. The pre- and post-intervention survey questions still required some level of EI to answer, allowing space and time to write down thoughts, feelings, perceptions, and specific examples within a qualitative framework. Engaging this level of emotional intelligence not only exposed thoughts and feelings about the topic of Professionalism, it allowed the residents to reflect on situations and strategies for the future, potentially allowing them to positively impact their professional success. Unfortunately, EI was not measured in this study prior to participation in the surveys and therefore it is difficult to interpret the qualitative data with respect to the contribution of EI to the results.

**Teaching and Learning Professionalism**

A central theme that emerged from the qualitative data was the idea of the innateness of Professionalism. One resident felt that professionalism was innate; that learners without an innate sense of professionalism could not be taught how to behave professionally.
This is not a belief held by the medical profession. In almost every medical professional body in North America, professionalism is considered to be a principal topic and its teaching is a requirement in the faculties of medicine. However, the mere fact that professionalism is being taught does not mean that professionalism is being learned. Many of the qualities that make up a medical professional go much further than medical knowledge and expertise. Empathy, compassion, and selflessness aren’t understood and employed through simple book learning, and a tutorial on accountability won’t miraculously transform a resident with a lack of integrity. One Canadian physician wrote, “As a clinical teacher, I can testify that professionalism is no doubt one of the hardest points to evaluate and remediate in our trainees.”

Other residents felt that a sense of professionalism can be developed and should be explicitly taught starting in medical school into residency. Further, they felt that learning specific components of professionalism required self-awareness and an ability to self-reflect. Dr. Pier Bryden, a psychiatrist and faculty lead in ethics and professionalism for undergraduate medical education (UGME) at the University of Toronto, believes that while mentoring may be more important in teaching professionalism, there are ways to teach components of professionalism in the classroom and in clinical settings. He encourages the use of reflective writing and small group discussion activities after a clinical scenario. “You get the student to take a step back from the biomedical context and ask them to pause and reflect in the broader context about what they are doing.” While unsure if this improves empathy or improves patient interactions, he feels it’s still important to explore the issues.
The Ontario Medical Association recently wrote a report on what they termed the ‘erosion of professionalism,’ ending the report with a recommendation for what they feel is the future of professionalism education. The report stated, “Positive role models—those perceived as having a high degree of professionalism and encouraging similar behaviour—were said to have the greatest impact on students’ professional development. Making role modeling a more active process by intentional attempts to transmit professional values and attitudes throughout the course of day-to-day activities, would seem a fundamental step to increasing medical professionalism [and as such], medical schools must hold their entire faculty to the highest professional standard.”

Bryden also noted that faculty involved in medical education claimed their “own lapses in professionalism and their failure to address these with one another posed the greatest barrier to teaching professionalism to trainees, given a perceived dominance of role modeling as its most influential teaching tool.” Successful modelling of professionalism demands that we are able to incorporate our own lapses into the discussion.

There have been many studies that do suggest that professionalism as a competency that can be learned. Hochburg et al demonstrated positive results after teaching six interactive sessions on information gathering, rapport building, patient education, delivering bad news, responding to emotion, and interdisciplinary respect. Surgical residents were evaluated pre- and post-intervention using a six-station Objective Structured Clinical Examination (OSCE) using standardized patients with varying Professionalism and Communication scenarios. The residents were evaluated according to a strict criterion by the standardized patients and improvements in the competencies of Professionalism and Communication did achieve statistical significance (p = .029 and p=.011 respectively). Lifchez and Redett, 2014, also employed a standardized patient
(SP) model in evaluating the effect of an education course on communication skills and professionalism. Residents were assessed in an SP encounter on delivering bad news, taught curriculum on communications skills and professionalism, and then assessed in a second SP encounter, again, delivering bad news. SP evaluation correlated with increased comfort in delivering bad news in the second encounter.304

A follow-up study was done by Hochberg et al regarding integration of professionalism into residency education and whether it led to change in resident culture. In the 3 years after implementing the professionalism curriculum, residents were asked to participate in annual self-assessments of their perceived professional abilities to perform 20 defined tasks representing core ACGME professionalism domains, were annually evaluated by SPs, and were asked to fill out a survey from the Surgical Professionalism and Interpersonal Communications Education Study Group. The results showed a positive change in self-perceptions of professionalism in all six domains, the participating residents showed a marked improvement in their professional skills as rated by the SPs, and residents were rated as being ‘slightly better’ or ‘much better’ compared with their performance five years earlier.305

A study out of the University of Washington between 2004 and 2005 sought to elicit the perspectives of medical students regarding the issue of learning professionalism. Structured interviews were employed with 56 students and analyzed. Role modeling was identified as an important way to learn professionalism. Students also identified group discussions and lectures as other ways of identifying and analyzing behaviour. They believed their professionalism stemmed from their values and upbringing and experiences prior to getting into medical school,
and felt that their professional behaviour evolved and improved as they worked directly with patients. A study by Park, Woodrow and Reznick done between 2004 and 2006 discussed the results of 34 semi structured interviews consisting of open ended questions regarding how the participants learned professionalism. Major themes included personal values and upbringing, role modeling, the structure of a surgical residency, and formal instruction. Of these 4 themes, role modeling was the dominant one, and participants identified observation, reflection and reinforcement as playing a key role in learning from role models. These studies suggest that the core components of professionalism, although sometimes innate in certain learners, can indeed be learned by most learners, and that the most important and prominent method of learning was via role-modeling.

The Dichotomy of Person, Time and Place in Professionalism

One resident wrote that they felt there seemed to be a dichotomy for some people with regards to professionalism in their personal and professional lives. Another resident wrote specifically of being a better colleague but not a better person. This response incurred many questions during qualitative analysis. Why does this individual see their personal identity as being separate and less developed than their professional identity? If they have improved as a colleague, doesn’t that also mean they have improved as a person? If they are better able to interact, communicate, and behave in a non-confrontational manner with colleagues, presumably informs their personal life and identity. These responses could point to a fractured sense of identity amongst residents and trainees. This fractured sense of identity termed ‘identity dissonance’ by Reese and Monrouxe in their 2018 article results from differences between
personal and professional identities (gender, and ethnicity, empathy and compassion vs objectivity and detached expert), competing values, feelings of disenchantment due to professional dilemmas, and circumstances that leave trainees feeling powerless (poor media portrayal, blurring of professional boundaries, work restrictions etc).308

Wilkinson et al, 2009, wrote that professionalism is often viewed in the singular and not as being multidimensional; that this multidimensional nature means that students and residents may be professional in one aspect and not in others.309 They also put forward that observing professional behavior in one aspect of life or in one situation is not always indicative of professional behavior in other aspects, or at all times.310 311 312 They go on to discuss that when considering professionalism, it is important to consider the context in terms of place and time, and not just the characteristics of an individual. They write, “Time and place interact with the person to influence not only what professionalism means or looks like on a particular occasion but also in ways that can hinder or help an individual to ‘behave professionally.’”313 As society changes, and medical education with it, we need to recognize that definitions and meanings of the core components of professionalism also change. There are limits to altruism as previously discussed, and concepts like confidentiality are no longer absolute values; there is occasionally the need to breech confidentiality to prevent harm. As society changes, individuals change over the course of their training and careers. It stands to reason that their understanding and sense of professionalism would also change as they learn, practice and grow within the circumstances of their training.
Wilkinson et al (2009) also discuss the idea that professionalism varies according to place. Just as ‘time’ can refer to stage of training or practice, ‘place’ can also encompass multiple meanings. In the world of medical training ‘place’ can refer to both a clinical circumstance or the work environment. Changing circumstances may require alternate responses and may also mask or reveal professional and unprofessional behaviours. Wilkinson et al (2009) give the example of the same professional physician who interacts with a patient in an outpatient clinic discussing a complicated procedure and obtaining consent. This interaction might be very different if the same physician was trying to obtain consent for a life-saving operation from an unstable trauma patient. Wilkinson et al posit that while the general principles for respecting patient autonomy and doing what’s best for the patient are the same, the attempt to honour them in each situation results in very different behaviour.

Multiple studies have found that it may be more difficult for individuals to act professionally when they work in unprofessional environments. As previously discussed, role modeling and the hidden curriculum can have a prevailing effect on learners. The core components of professionalism can be taught, but if learners don’t see this modelled, or worse, see the opposite modelled, the teaching is powerfully undermined. While ‘time’ and ‘place’ can alter behaviour and expectation, the third component ‘person’ touches on what Wilkinson et al describe as ‘personal resources and flaws’ that are brought into learning and the work environment. Characteristics that may be felt to be innate may not always be stable. These characteristics can be developed, encouraged, or eroded and depend on the learning or work environment. This theory is consistent with the concept first proposed by Aristotle, that virtues are acquired by repetitive practice: “an individual becomes virtuous by repeatedly doing what a
virtuous person would do; a person develops courage by repeated practicing being courageous or compassion by repeatedly being compassionate.”\textsuperscript{320} This is consistent with the concept of deliberate practice in the development of musical performance skills, in clinical skills, and with cognitive load theory which suggests that some professional behaviours can be learned through feedback and evaluation.\textsuperscript{321 322 323}

The ability to act in a professional manner lies at the intersection of ‘person,’ ‘place’ and ‘time.’ These three variables are changing continuously and determine our immediate reactions within the training and work environment. The attitudes, values and personality traits of the learner, combined with the stage of training and experience, the culture of the program and available resources all coalesce to produce responses which may be considered more or less professional. This reframing of professionalism as multifactorial removes the entire responsibility for acting in a professional manner from the individual and emphasizes that behaviour is affected by place and time. This may explain the perceived dichotomy of some responses, with respondents feeling professional in one environment, at one time, while feeling less so in another environment. More importantly, it emphasizes that allowing a person to act professionally demands an awareness of the contribution of all three variables and that an effort be made to optimize all three in order for people to act professionally.

One of the greatest acknowledgements and efforts made to effect change in the area of professionalism within medical education has been the creation of the multiple mini interview (MMI). This time-tested tool, developed and implemented by McMaster University in 2002 for medical school admission interviews, has gained popularity throughout North American medical
schools and has been adopted as an alternative to the traditional panel style interview. The traditional panel interview occurs in one place, at one time making it difficult to identify stable demonstrations of the characteristics and elements of professionalism. This in turn makes it difficult to predict future professional behaviour. Wilkinson et al, 2014, write “if it is accepted that professional behaviours are dependent on time and place, then one-off selection procedures face considerable challenges if they are to predict future professional behaviours.” Many studies looking at MMIs versus traditional panel interviews are noting many advantages. Some of these advantages include having multiple objective impressions of applicant response, reaction and behaviour, acknowledgement and assessment of communication skills and components of professionalism and the ability to discuss multiple ethical concerns and dilemmas.

The Mayo Clinic has taken a different approach to addressing the complexity of ‘place’ and ‘time’ with regards to professionalism. They have created an office of ‘Integrity and Compliance’ complete with a ‘Compliance Hotline’ that any individual can call and report misconduct, grievance, or concern. Their code of conduct applies to all staff and learners, and demonstrates their commitment to integrity, ethics, and to a culture of professionalism. The ‘Compliance Hotline’ takes calls and concerns in any and all circumstances, including for off duty staff and learners. If someone observes a staff member, even off duty, engaging in behaviour that is felt to be unprofessional, unethical, or demonstrating a lack of integrity, they may call the hotline and report the behaviour and are assured it will be looked into and addressed. This policy demonstrates an awareness that ‘place’ and ‘time’ have an effect on professional behaviour, and by placing such high importance on maintaining these professional behaviours
both on and off duty, the Mayo Clinic call their staff and learners up to a high standard of ethics, integrity, and professionalism.

**Self-Awareness of Professionalism**

Several residents noted feeling an increased sense of self-awareness with respect to professionalism following the PEP. Many residents felt that not only did they have a better understanding of what attitudes and behaviours encompassed ‘professional’ or ‘unprofessional’ behaviour, they were more aware of how their actions could come across to colleagues. Several residents felt that this increased awareness led to a change in behaviour. The Professionalism Tag cited specific examples of professional behaviour under each component. Because the tag was discussed at length with the resident group, and specific examples were explored and repeatedly revisited, even if residents didn’t wear the tag, or look at it again, these specific examples likely aided in the learning and understanding of the core components which altered thought processes and behaviours. As previously discussed, this deliberate and repetitive practice of professional behaviours, combined with feedback and evaluation, does lead to changes in behaviour and skill level. These same residents felt they were more punctual, they were more polite, and that they interacted with difficult colleagues in a more professional and non-confrontational manner. Further research is required to assess how long these attitude and changes in attitudes and behaviour persists after the Professionalism Education Program, and whether refresher courses would beneficial to maintain a more professional atmosphere.
One resident felt that certain individuals see their lack of professionalism as part of their professional identity, that it defined who they were as a professional. They wrote, ‘I have come to a better understanding that some “professionals” see their lack of professionalism as professional.’ Peter Burke writes that “identities are meanings that individuals hold for themselves, what it means to be who they are. These identities have bases in being members of groups (social identity), having certain roles (role identities), or being the unique biological entities that they are (personal identities).” This social role and personal identity continues to be developed and shaped through medical school and residency. Tajfel and Turner propose that people gravitate to certain groups, and derive their identity based on the group identity and form boundaries with other groups. It is within this group identity that self-esteem is promoted, increasing the commitment to the group. They believe the three components of social identity are (1) categorization, (2) identification, and (3) comparison: comparing our own groups to others ending in favourable biases towards our own groups. This process leads to stereotyping which once formed can become rigid.

Coulehan characterizes three types of professional identities in medicine: “(1) technical identity which entails letting go of traditional values, embracing cynicism about duty and integrity, narrowing focus and responsibility to the technicalities of the job; (2) non-reflective identity: consciously embracing traditional medical values while subconsciously behaving in opposition (self-deluded and detached); and (3) compassionate and responsive identity: internalizing and manifesting professed behaviour.” Coulehan demonstrated that a
large percentage of medical graduates fall into a non-reflective professional identity and proposes that this is a result of conflicting values in the learning environment. He writes that when deficits in clinical reasoning were identified, these learners were unable to reflect appropriately. These same learners required expert mentorship and facilitation to acknowledge and appropriately reflect. This demonstrates the importance and necessity of strong role-modelling, and appropriate supervision and mentorship. Without these things, learners may internalize beliefs that certain unprofessional behaviours are ‘just the way things are in medicine.’ These learners begin to see their unprofessionalism as part of their professional identity.

**Practice Makes Perfect**

Residents overwhelmingly felt that Crucial Conversations® was the most helpful component of the PEP, and that conflict resolution type courses would be of most benefit for future programming. The Crucial Conversations course was explicitly taught by a licensed life coach and there was extensive time given for practice and interaction between residents to work on skill acquisition. The literature is clear on the fact that repetitive interactions and practice, improve communication and professionalism. Although, the residents did not explicitly state that the repetition and practice was the causative factor, this is likely why they felt the course was the most beneficial, and why they would appreciate further instruction on conflict management.
Sustainability

Although there was evidence of significant change within the area of social responsibility, a trend towards improvement in the areas of excellence, integrity and professional duty, and an overall sense of improved self-perceptions of professionalism and professional behaviour, there remains the questions of longevity of response. As previously discussed, a responsive and reflective professional identity results in the internalization and manifestation of professional values. Stuart Lane, the chair of Professional Development for the Sydney Medical Program, states that this reflective identity is more likely to develop when alignment occurs between self-identity, personal values, expectation of others, the social identity of the professional group, and the cultural milieu of the working environment. Because identity comprises values and goals, which determines motivation, it has important implications for self-regulated learning. Thus, professionalism must be defined by the individual and personal beliefs regarding professionalism must align with the organization, group or society to which they belong.

Learners set to work in defining their personal sense of professionalism and align themselves with the profession of medicine which espouses the virtues and values of altruism, accountability, compassion, respect, excellence, integrity, and social responsibility. And yet, what they often find once within the medical community, is a hidden curriculum full of unprofessional behaviour, power struggles, cynicism, and burnout. The desire for a sense of belonging and the need to be an accepted member of the group, can lead to conformity, which leads to a lack of self-regulation. This lack of self-regulation can lead to deficits in reflection,
professional behaviour, and clinical reasoning. If then, role-modelling is one of the greatest methods for observing, understanding, and internalizing professional behaviour as previously discussed, the behaviour that these learners are observing, internalizing, and subsequently imitating, are unprofessional. To maintain the success of a Professional Education Program, the hidden curriculum needs to be addressed, and role-modelling of professional behaviours must ensue.

In parallel with addressing the hidden curriculum, focus must be placed on critical self-reflection amongst learners. Stuart Lane discusses the three levels of reflection that occur for learners: (1) superficial reflection which is solely descriptive. This type of reflection references existing knowledge but there is no criticism or critique of it; (2) Moderate reflection or dialogic reflection involves removing one’s self from a situation and examining thoughts, feelings, assumptions and gaps in knowledge. In this way the learner understands what has been learned and any future action required; and, (3) Deep or critical reflection resulting in sustained change. This latter level of reflection requires the learner to understand the importance of considering multiple perspectives, which informs behaviour modification, resulting in altered behaviour in subsequent situations.

Study Limitations

The purpose of this study was to determine if self-perceptions of professionalism improved after the implementation of a Professionalism Education Program using a mixed
methods approach incorporating both quantitative and qualitative measures. The quantitative portion of the study measured changes in self-perceptions of professionalism along several dimensions using a validated scale. The qualitative portion of the study sought to define specific examples of professionalism issues, how residents defined professionalism and viewed specific components of the program, and how their perception of their behaviour had changed following introduction of the PEP. This portion did not fully or completely measure the how or the why of their perceived behavioural changes.

Sample Selection and Bias

An important limitation to this study was sample selection and selection bias. Participants were recruited for the study by asking for participation amongst all General Surgery residents enrolled in the program at the time of the study. The Professionalism Education Program was mandatory, however, participation in the study was not. Although residents were assured of anonymity, and that rotation evaluation would not be affected by participation or lack thereof, residents may not have felt comfortable opting out. These residents may have consented to the study, but not actually participated in the survey evaluations. Uncontrolled variables included motivation, EI, and previous professionalism or leadership development.

In addition, the PEP was administered at a time when both the Department of Surgery and General Surgery residency program were struggling with respect to issues of professionalism and morale was low. The topic and teaching of professionalism was seen as ‘fluffy’ by some of
the faculty, as well as many of the residents. Reactions towards the project ranged from openly hostile, to dismissive. These responses created a bias towards the PEP, participation, and possibly the responses (or lack thereof) to the surveys.

Post-Intervention Response Rates

The predominant number of post-intervention responses were recorded from female junior residents (6/7, 86%), with lower response rates from male juniors (0/3, 0%) and female senior residents (2/11, 18%). Further research with regards to self-perceptions of professionalism among male General Surgery residents is warranted. One factor that may have led to lower participation rates included vacation and/or elective time, wherein residents were away for recruitment and participation in components of the Professionalism Education Program.

Another factor encountered was the sentiment that because the research was surrounding a “fluffy,” controversial and vulnerable topic like Professionalism, it was perhaps not worth the time to participate. In general, individuals are more likely to participate in research if there is established trust between the researcher and the target population, if there is an interest and appeal to participate, there is an obvious benefit, if the research is felt to be valuable to the individual, and finally if the participation is not extensive, burdensome or require vulnerability to sensitive issues.
**Intervention Tools**

The intervention tool utilized for the quantitative portion of this study was a previously validated survey developed by the American Physiotherapy Association. This survey was developed to measure self-perceptions of professionalism in their learners. The core values, and their definitions, outlined in the survey, matched our definitions of professionalism and the core values that we felt important to include in the Professionalism Education Program. From those core values, the PEP was developed. What was not fully considered, was the sample indicator questions on the survey. Although the definitions of core values were explicitly taught and discussed, the sample indicators did not inform the rest of the education program, making it difficult for the residents to answer with understanding or deep self-reflection.

The SurveyMonkey® survey questions were designed to obtain information regarding which parts of the PEP residents found most and least helpful, and to elicit a situation wherein residents encountered a professionalism issue and how it was resolved. The final question on the survey asked residents to detail how they felt their perception of their own professionalism had changed following the implementation of the PEP. Incorporating more specific questions into the survey would have given more accurate information in order to answer the question this study set out to answer. Instead of asking how the residents’ perceptions had changed, incorporating a ‘yes’ or ‘no’ question with a mandatory response would have provided much more specific and potentially more accurate information. As in all studies employing thematic analysis, there is limited interpretation of the data in that the
researcher cannot make claims about user language, cannot ascribe meaning to words, and there is potential to miss nuanced data.\textsuperscript{358}

As the interviews were voluntary, a selection bias likely occurred.\textsuperscript{359 360 361} The topic and residents’ perceptions of Professionalism has implications for what type of people volunteered, and therefore the generalizability of the interview responses.\textsuperscript{362} Residents with a greater interest, higher emotional intelligence quotient, and greater ability to self-reflect, could have been more likely to volunteer to answer more in-depth questions about their self-perceptions of professionalism. This would have led to skewing of the results and weakened the generalizability of the results.

Further research should seek to develop intervention tools that are specific and complementary to the design and implementation of our Professionalism Education Program. The sample indicators should relate specifically to the curriculum and not nebulous situations or scenarios. Surveys should include a range of closed and open-ended questions which are specifically designed to answer the study questions. Adding questions that provide information regarding age, prior professionalism or leadership training, and EQ testing, would also provide helpful information with respect to how these variables impact on self-perceptions of professionalism.
Sample Size

The size of the study group was limited to the number of General Surgery residents enrolled in the General Surgery program at the time of the study. The sample size was too small to provide conclusive results. There was attrition due to changing rotations, vacation and elective time, as well as a lack of mandatory attendance at the academic half day session that the post-intervention survey was administered. The literature shows that small samples sizes can affect the reliability of a study because it leads to higher variability and lower generalizability of a study. Despite the small sample size, findings that resulted from analysis still showed statistical significance in the area of social responsibility and a strong trend towards statistical significance in other core principles. This small sample size may have led to a type II error in the categories where significance was not noted. Due to the small size, trends in gender and residency level have limited validity and may also be misrepresented.

Response Rates

Although there was a good response rate pre-intervention (24/26, 92%), post-intervention and subsequent participation levels showed lower rates. Even though the post-intervention surveys were dispersed and collected at a subsequent mandatory academic session, lower response rates were encountered (16/26, 62%). Time of year, vacation allocation, and loss of interest in the study could have contributed to this lower response rate. Many residents were on vacation during the month of December, and multiple comments were made about not wishing to do another survey.
The SurveyMonkey survey and interviews had even lower response rates (12/26, 46% and 4/26, 15%, respectively). The SurveyMonkey surveys were unfortunately distributed at a time when the residents were receiving multiple emails with survey links for other studies. It is possible that feelings of apathy and/or burnout also contributed to the lack of response. Though the interviews were advertised as only being 30 minutes, several residents were overheard saying they didn’t feel they had time to dedicate to this part of the study. Other methods of data acquisition should be considered for future research, including use of mandatory academic time for recorded discussions, paper surveys with room for descriptive and in-depth responses, or emailing a link during mandatory academic time and giving 20 minutes for all residents to provide responses. Future studies could include focus groups and incentivization to increase participation.

**Self-Reflection**

Another limitation was the self-perceptive/self-reflective nature of the study. As previously discussed, results of this study are less robust than if outside observation correlated with the self-perceptions. The addition of 360-evaluations, or multi-rater feedback, with regards to perceptions of professionalism and professionalism would be invaluable and increase the validity and generalizability of the research.365 366

In light of these limitations, and the importance of formal Professionalism education, further research is vital. This research is important in its implication for surgical
residency programs, but also for its wider dissemination to other specialty programs, in medical school, and other healthcare related training programs. This thesis represents the first attempt within any residency program in Manitoba to assess learner knowledge and understanding of Professionalism. Since other programs and other healthcare specialty training programs in Manitoba, as well as programs in other provinces, face the same or similar issues related to Professionalism, recommendations can be made not only for Manitoba, but on a national level. This research also highlights where additional investigation is required.

Further research

Further investigation with a larger sample size could help to determine if the trends toward significance in the majority of the core principles of professionalism continued, and whether they could reach statistical significance. Adding demographic information to the pre- and post-intervention surveys would also help to ascertain whether gender might account for higher or lower self-perceptions of professionalism as in the study done by Symons et al. 367

Further research could also be done to assess how long these changes in attitude and behaviour persist following the introduction of the PEP, and whether refresher courses would be beneficial to maintain a more professional atmosphere. Follow up questions and examples could also be explored in the future with regards to professional identity.
Subsequent research should include an EI aspect, measuring residents’ EQ prior to participation in the study, in order to investigate more fully the effect of EI on self-perception of professionalism.
Conclusions

This thesis highlights the core principles of professionalism, provides a framework for creating a Professionalism Education Program, and demonstrates the improvement in self-perceptions of professionalism in General Surgery Residents following the introduction of a Professionalism Education Program. The proposed Professionalism Education Program significantly improved residents’ self-perceptions of professionalism in the area of social responsibility. There was a trend towards significance in other core principles. It also represents the first attempt at the University of Manitoba to assess attitudes and beliefs surrounding professionalism, to develop a Professionalism Education Program, and to implement the program within a learning environment for the purpose of measuring changes in self-perceptions of professionalism. Since other programs, faculties, and medical training centres around the world face similar professionalism challenges, recommendations for the General Surgery Program at the University of Manitoba apply at the program, university, national, and international level within educational institutions.
Summary

The topic of Professionalism is complex in terms of the definition and attributes, the teaching of concepts, and the assessment/evaluation. It has been identified that while role modeling and teaching of Professionalism is rife within the ‘hidden curriculum,’ medical schools and residency programs do a poor job of explicitly teaching and evaluating Professionalism. Before Professionalism as a concept can be taught, a definition and its attributes must be agreed upon and then must be explicitly taught.

Encounters surrounding issues of professionalism are common on call, in the operating room, during ward rounds, in the office of attending physicians, while scheduling call shifts, and even in elevators and stairwells around the hospital. These interactions have been identified as being a source of frustration, anxiety and stress for many healthcare learners and residents. With the administration of a Professionalism Education Program, self-perceptions of professionalism can and do show trends of significant improvement, particularly in the area of social responsibility. Also identified after administration of the PEP are improvements in self-awareness as it relates to Professionalism. This self-awareness translates into perceived (and potentially real) changes and improvements with regards to professional behaviour. Residents described improved punctuality and politeness, and professional and non-confrontational behaviours during difficult interactions with colleagues.
Further research and investigations are required with regards to evaluation of the Professionalism Education Program. This should include 360-degree evaluations of the learners pre- and post-intervention, as well as an evaluation of its translational ability across other specialities and healthcare programs in Manitoba and beyond. This research should be an ongoing priority for the General Surgery program at the University of Manitoba and should be incorporated into the Post Graduate Medical Education core curriculum. The PEP could additionally be adapted for the medical school and other healthcare faculties in an effort to explicitly teach Professionalism. Engaging learners before they get into specialty training programs and professional careers ensures awareness and understanding of the attributes and components that make up professional behaviour. This early awareness and equipping not only prepares learners for a successful and fulfilling career, it improves workplace engagement, cohesion and communication, and ultimately improves patient safety.
References

1 Osler W. On the educational value of the medical society. In: Aequanimitas, with other addresses to medical students, nurses and practitioners of medicine. 1932. 3rd edn. Blakiston, Philadelphia, pp 395–423

2 Anonymous. 2019


4 Johnston, Cupples, McGlade. Medical Students’ Attitudes to Professionalism: An Opportunity for the GP Tutor? Education for Primary Care 22(5):321-7 - September 2011

5 Binder, Freidli, Fuentes-Afflick. Preventing and Managing Unprofessionalism in Medical School Faculties. Academic Medicine: April 2015 - Volume 90 - Issue 4 - p 442–446


11 Accreditation Council for Graduate Medical Education (ACGME)The history of medical education accreditation. Available at http://www.acgme.org/acgmeweb/About/ACGMEHistory.aspx


18 Toolbox for the evaluation of competence. [http://www.acgme.org]


26 General Medical Council. Tomorrow's Doctors: Outcomes and Standards for Undergraduate Medical Education. GMC; 2009.


Chester, Eric. 10 Ways to Encourage Employees to Take Ownership in their Work. 2016. Online at {https://ericchester.com/10-ways-encourage-employees-to-take-ownership-at-work/}


Jebril MY. The evolution and measurement of professional identity. PhD., Disseration. The Graduate School of the Texas Woman’s University, College of Health Sciences 2008-11.

Jebril MY. The evolution and measurement of professional identity. PhD., Disseration. The Graduate School of the Texas Woman’s University, College of Health Sciences 2008-11.


339-348.


339-348.


Jebril MY. The evolution and measurement of professional identity. PhD., Disseration. The Graduate School of the Texas Woman’s University, College of Health Sciences 2008-11.


Jebril MY. The evolution and measurement of professional identity. PhD., Disseration. The Graduate School of the Texas Woman's University, College of Health Sciences 2008-11

Jebril MY. The evolution and measurement of professional identity. PhD., Disseration. The Graduate School of the Texas Woman's University, College of Health Sciences 2008-11

Jebril MY. The evolution and measurement of professional identity. PhD., Disseration. The Graduate School of the Texas Woman's University, College of Health Sciences 2008-11


Jebril MY. The evolution and measurement of professional identity. PhD., Disseration. The Graduate School of the Texas Woman's University, College of Health Sciences 2008-11


Hafferty FW, O'Donnell JF. The Hidden Curriculum in Health Professional Education. 2014.Hanover, NH: Dartmouth College Press


White CB, Kumagai AK, Ross PT, Fantone JC. A qualitative exploration of how the conflict between the formal and informal curriculum influences student values and behaviors. Acad Med. 2009;84:597-603


119

MacLeod A. The hidden curriculum: Is it time to re-consider the concept? Med Teach. 2014;36:539-540.


Huddle TS. Teaching professionalism: is medical morality a competency? Acad Med. 2005;80:885–891


Merriam-Webster.com. 'Mindset.' Merriam-Webster, n.d. Web


173 Alexander, 1994


176 Nichols 2001

177 Becker 1993


Braun V., Clarke V. *Using thematic analysis in psychology*. Qualitative Research in Psychology. 2006;3(2):77–101


Study response, e-mail result to Rebecca Whitley, February/March 2016

Lemmp, H and Seale, C. *The Hidden Curriculum in Undergraduate Medical Education: Qualitative Study of Medical Students’ Perceptions of Teaching*. BMJ 2004; 329:770

Study response, e-mail result to Rebecca Whitley, February/March 2016


Oxford dictionary “Emotional Intelligence”

Salovey and Mayer. Emotional Intelligence. Imagination, Cognition and Personality, 9(3), 185–211. 1990


291 Harris J. Altruism: Should it be Included as an Attribute of Medical Professionalism? Health Professions Education. 2018 4(1):3-8

292 AAMC 1998


297 Harris J. Altruism: Should it be Included as an Attribute of Medical Professionalism? Health Professions Education. 2018 4(1):3-8


Harris J. Altruism: Should it be Included as an Attribute of Medical Professionalism? Health Professions Education. 2018 4(1):3-8


Smith S, Tallentire V, Cameron H, and Wood S. The Effects of Contributing to Patient Care on Medical Students’ Workplace Learning. Medical Education. December 2013. 47(12): 1184-1196


Thomas N. Resident Burnout. JAMA 2004; 292(23):2880-89


Biaggi P, Peter S, Ulich E. Stressors, emotional exhaustion and aversion to patients in residents and chief residents—what can be done? *Swiss Med Wkly*. 2003;133:339-346


PGME. Core Curriculum. (http://umanitoba.ca/faculties/health_sciences/medicine/education/pgme/core_curriculum.html)


Fedorov, Mannino, Zhang. Consequences of dichotomization. Research Statistics Unit, Biomedical Data Sciences, GlaxoSmithKline Pharmaceuticals, Collegeville, PA, USA 2 Department of Biostatistics and Epidemiology, School of Medicine, University of Pennsylvania, Philadelphia, PA, USA

Fedorov, Mannino, Zhang. Consequences of dichotomization. Research Statistics Unit, Biomedical Data Sciences, GlaxoSmithKline Pharmaceuticals, Collegeville, PA, USA 2 Department of Biostatistics and Epidemiology, School of Medicine, University of Pennsylvania, Philadelphia, PA, USA


Yarnold, Paul. Optimal Data Analysis, LLC. Optimal Data Analysis Copyright 2014 by Optimal Data Analysis, LLC Vol. 3 (March 30, 2014), 19

Bryant, Harrison. How to create an ASCII input data file for UniODA and CTA software. Optimal Data Analysis, 2, 2-6, 2013.

Grimbeek, Bryer, Beamish and D'Netto. Use of data collapsing strategies to identify latent variables in CHP questionnaire data. Research Gate. 2005.


Collier R. Professionalism: Can it be Taught? CMAJ. 2012. 184(11):1234-1236

Collier R. Professionalism: Can it be Taught? CMAJ. 2012. 184(11):1234-1236


Collier R. Professionalism: Can it be Taught? CMAJ. 2012. 184(11):1234-1236

Collier R. Professionalism: Can it be Taught? CMAJ. 2012. 184(11):1234-1236


Collier R. Professionalism: Can it be Taught? CMAJ. 2012. 184(11):1234-1236


Rees C, and Monrouxe L. Who are you and what do you want to be? Key considerations in developing professional identities in medicine. Medical Education. 2018; 209(5): 202-204


Wilkinson T, Moore M, Flynn E. Professionalism in its Time and Place: Some Implications for Medical Education. The New Zealand Medical Journal. July 2012; 125(1358)

Wilkinson T, Moore M, Flynn E. Professionalism in its Time and Place: Some Implications for Medical Education. The New Zealand Medical Journal. July 2012; 125(1358)
Wilkinson T, Moore M, Flynn E. Professionalism in its Time and Place: Some Implications for Medical Education. The New Zealand Medical Journal. July 2012; 125(1358)

Hafferty FW, Castellani B. A sociological framing of medicine's modern-day professionalism movement Medical Education 2009;43(9):826–28


Engel GL. What if music students were taught to play their instruments as medical students are taught to interview? Pharos of Alpha Omega Alpha Honor Medical Society 1982;45(4):12–13


Wilkinson T, Moore M, Flynn E. Professionalism in its Time and Place: Some Implications for Medical Education. The New Zealand Medical Journal. July 2012; 125(1358)

Pau A, Chen YS, Lee VK, Sow CF, De Alwis R. What does the multiple mini interview have to offer over the panel


Eva KW, Reiter HI, Rosenfeld J, Norman GR. The Ability of the Multiple Mini-Interview to Predict Preclerkship Performance in Medical School. Academic Medicine 2004;79(10):S40-S42.


Engel GL. What if music students were taught to play their instruments as medical students are taught to interview? Pharos of Alpha Omega Alpha Honor Medical Society 1982;45(4):12–13

Study response, e-mail result to Rebecca Whitley, February/March 2016


Engel GL. What if music students were taught to play their instruments as medical students are taught to interview? Pharos of Alpha Omega Alpha Honor Medical Society 1982;45(4):12–13


Lempp H, Seale C. The Hidden Curriculum in Undergraduate Medical Education: Qualitative Study of Medical Students’ perceptions of teaching. BMJ 2004; 329:770


Reflective practice in health: models of reflection [Internet]. La Trobe University [updated 2017 Apr; cited 2019, June].

Arfken C and Balon R. Declining Participation in Research Studies. Psychother Psychosom 2011;80:325–328


**Old Professionalism:**
- Detachment
- Paternalism
- Restricted communication with patients
- Medical beneficence most prominent ethical principle

**New Professionalism:**
- Empathy
- Emotional Engagement
- Open Communication
- Patient-centered
- Patient autonomy as most prominent ethical principle

---

**Figure 1. Old versus New Professionalism**

Figure 2 – Attributes of Physician/Medical Professional

Figure 3- Professionalism Education Program Timeline
Figure 4- Section of General Surgery Code of Professionalism Tag ©
Wit:  
14:17- 20:20  
21:37- 22:55  
31:30-34:06  
40:35-42:28  
51:48-52:52  
1:29:53-1:32:29

Malice:  
4:45-7:00  
38:08-45:40  
3:22-7:30  
10:55-12:05  
15:45-18:11  
25:03-26:48  
28:00-29:35  
39:30-40:57

Grey’s Anatomy S6:E8:  
3:22-7:30  
10:55-12:05  
15:45-18:11  
25:03-26:48  
28:00-29:35  
39:30-40:57

Figure 5- Cinemeducation® Movies and Time Clips
What check your gender and residency level.

Answered: 12  Skipped: 0

<table>
<thead>
<tr>
<th>ANSWER CHOICES</th>
<th>RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male Junior</td>
<td>0.00%</td>
</tr>
<tr>
<td>Female Junior</td>
<td>50.00%</td>
</tr>
<tr>
<td>Male Senior</td>
<td>33.33%</td>
</tr>
<tr>
<td>Female Senior</td>
<td>16.67%</td>
</tr>
</tbody>
</table>

| TOTAL          | 12        |

*Figure 6- Survey Monkey® Demographics*
Who did the professionalism situation arise with?

Answered: 12  Skipped: 0

<table>
<thead>
<tr>
<th>ANSWER CHOICES</th>
<th>RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attending staff</td>
<td>8.33%</td>
</tr>
<tr>
<td>PT/OT/Homecare</td>
<td>0.00%</td>
</tr>
<tr>
<td>Co resident same specialty</td>
<td>25.00%</td>
</tr>
<tr>
<td>Co resident different...</td>
<td>33.33%</td>
</tr>
<tr>
<td>Nursing staff</td>
<td>16.67%</td>
</tr>
<tr>
<td>Spouse/Partner</td>
<td>16.67%</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>12</strong></td>
</tr>
</tbody>
</table>

*Figure 7- Survey Monkey® Professionalism Situations*
Are there any other tools you feel could have helped you deal with this professionalism situation?

Answered: 12   Skipped: 0

<table>
<thead>
<tr>
<th>ANSWER CHOICES</th>
<th>RESPONSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Conflict resolution</td>
<td>50.00%</td>
</tr>
<tr>
<td>Counseling</td>
<td>16.67%</td>
</tr>
<tr>
<td>Personal coaching</td>
<td>33.33%</td>
</tr>
<tr>
<td>Mediator</td>
<td>16.67%</td>
</tr>
<tr>
<td>Support</td>
<td>41.67%</td>
</tr>
</tbody>
</table>

Total Respondents: 12

*Figure 8-Survey Monkey® Professionalism Tools*
Please rank the components of the Professionalism Education Program in order of most impacting to least impacting.

Answered: 12  Skipped: 0

Figure 9 - Survey Monkey® Curriculum Component Ranking
Table 1. Reliability of sub-items within each Core Value

<table>
<thead>
<tr>
<th>Category</th>
<th>Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountability (9 items)</td>
<td>.928</td>
</tr>
<tr>
<td>Altruism (4 items)</td>
<td>.828</td>
</tr>
<tr>
<td>Compassion/Caring (7 items)</td>
<td>.890</td>
</tr>
<tr>
<td>Excellence (10 items)</td>
<td>.915</td>
</tr>
<tr>
<td>Integrity (11 items)</td>
<td>.926</td>
</tr>
<tr>
<td>Professional Duty (7 items)</td>
<td>.807</td>
</tr>
<tr>
<td>Social Responsibility (11 items)</td>
<td>.921</td>
</tr>
<tr>
<td></td>
<td>Non-Missing (n=14)</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Accountability</td>
<td>4.14 (0.67)</td>
</tr>
<tr>
<td>Altruism</td>
<td>3.86 (0.85)</td>
</tr>
<tr>
<td>Compassion/Caring</td>
<td>3.96 (0.76)</td>
</tr>
<tr>
<td>Excellence</td>
<td>3.95 (0.57)</td>
</tr>
<tr>
<td>Integrity</td>
<td>4.25 (0.58)</td>
</tr>
<tr>
<td>Professional Duty</td>
<td>4.08 (0.54)</td>
</tr>
<tr>
<td>Social Responsibility</td>
<td>3.34 (0.69)</td>
</tr>
</tbody>
</table>

Note: Mean (SD)
Table 3. Pre-Post Change Comparisons

<table>
<thead>
<tr>
<th>Core Value</th>
<th>Change</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accountability</td>
<td>0.04 (0.12)</td>
<td>.75</td>
</tr>
<tr>
<td>Altruism</td>
<td>0.12 (0.15)</td>
<td>.42</td>
</tr>
<tr>
<td>Compassion/Caring</td>
<td>0.16 (0.15)</td>
<td>.32</td>
</tr>
<tr>
<td>Excellence</td>
<td>0.24 (0.15)</td>
<td>.13</td>
</tr>
<tr>
<td>Integrity</td>
<td>0.21 (0.11)</td>
<td>.08</td>
</tr>
<tr>
<td>Professional Duty</td>
<td>0.15 (0.09)</td>
<td>.11</td>
</tr>
<tr>
<td>Social Responsibility</td>
<td>0.29 (0.13)</td>
<td>.04</td>
</tr>
</tbody>
</table>

Note: Change (Std error)

*Restricted maximum likelihood estimation (REML)
**Appendix A - Professionalism in a General Surgery Residency Program: Core Values**

Professionalism in a General Surgery Residency Program: Core Values

For each core value listed, read the definition and sample indicators and check only one of the self-assessment ratings that best represent the frequency with which you demonstrate the behaviour.

1 = Never
2 = Rarely
3 = Occasionally
4 = Frequently
5 = Always

<table>
<thead>
<tr>
<th>Core Values</th>
<th>Definition</th>
<th>Sample Indicators</th>
<th>Self-Assessment</th>
</tr>
</thead>
</table>
| Accountability | Accountability is active acceptance of the responsibility for the diverse roles, obligations and actions of the physician. These include self-regulation and other behaviours that positively influence patient outcomes, the profession, and the health needs of society | 1. I respond to patient’s/colleagues goals and needs  
2. I seek and respond to feedback from multiple sources  
3. I acknowledge and accept the consequences of my actions  
4. I take responsibility for learning and change  
5. I adhere to our Code of Professional Conduct  
6. I communicate accurately with patients and colleagues  
7. I participate in the achievement of patient and colleague goals  
8. I seek continuous improvement in quality of care  
9. I educate other students and learners in a manner that facilitates the pursuit of learning | 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 1 2 3 4 5 |
| Altruism | Altruism is the primary regard for or devotion to the interest of patients and colleagues | 1. I place patients’ or colleagues needs above my own  
2. I provide care to underserved and underrepresented populations | 1 2 3 4 5 1 2 3 4 5 |
| Compassion/Caring | 3. I provide patient services that go beyond expected standards of practice | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | 4. I place patient care and professional responsibilities above my personal needs | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | Compassion is the desire to identify with or sense something of another’s experience; a precursor of caring | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | Caring is the concern, empathy and consideration for the needs and values of others | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | 1. I understand the socio-cultural, economic and psychological influences on an individual’s life | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | 2. I am an advocate for the needs of patients and colleagues | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | 3. I communicate effectively with others, both verbally and non verbally | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | 4. I empower patients and colleagues to achieve the highest level of achievement as possible | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | 5. I recognize and refrain from action on my own social, cultural, gender, and sexual biases | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | 6. I embrace emotional and psychological aspects of relating with both patients and colleagues | 1 | 2 | 3 | 4 | 5 |
| Compassion/Caring | 7. I demonstrate respect for others and consider others as unique and valuable | 1 | 2 | 3 | 4 | 5 |
| Excellence | Excellence in a surgical practice involves consistently keeping up to date with current knowledge and theory, understanding personal limitations, exercising good judgment, challenging mediocrity, and developing new knowledge | 1 | 2 | 3 | 4 | 5 |
| Excellence | 1. I demonstrate investment into the profession of surgery | 1 | 2 | 3 | 4 | 5 |
| Excellence | 2. I recognize the importance of using multiple sources of evidence to support professional practice and decisions | 1 | 2 | 3 | 4 | 5 |
| Excellence | 3. I participate in integrative and collaborative practices to promote high quality health and educational outcomes | 1 | 2 | 3 | 4 | 5 |
| Excellence | 4. I convey intellectual humility in professional and personal situations | 1 | 2 | 3 | 4 | 5 |
| Excellence | 5. I demonstrate high levels of knowledge and skill in all aspects of the profession | 1 | 2 | 3 | 4 | 5 |
| Excellence | 6. I use evidence consistently to support professional decisions | 1 | 2 | 3 | 4 | 5 |
| Excellence | 7. I pursue new evidence to expand my knowledge | 1 | 2 | 3 | 4 | 5 |
| Excellence | 8. I engage in acquisition of new knowledge throughout my training and career | 1 | 2 | 3 | 4 | 5 |
| Excellence | 9. I share my knowledge with others | 1 | 2 | 3 | 4 | 5 |
| Excellence | 10. I contribute to the development and shaping of excellence in our profession | 1 | 2 | 3 | 4 | 5 |
| Integrity | Integrity is the steadfast adherence to high ethical principles or professional standards; truthfulness, fairness, authenticity, and following | 1 | 2 | 3 | 4 | 5 |
| Integrity | 1. I abide by the rules, regulations, and laws applicable to my profession | 1 | 2 | 3 | 4 | 5 |
| Integrity | 2. I adhere to the highest standards of my profession | 1 | 2 | 3 | 4 | 5 |
through on commitments

3. I articulate and internalize stated ideals and professional values

4. I use power judiciously recognizing it is an earned privilege

5. I resolve dilemmas with respect to a consistent set of core values

6. I am trustworthy

7. I take responsibility to be an integral part in the management of patients

8. I know my limitations and ask for help when I need it

9. I confront harassment and bias in myself and in others

10. I recognize the limits of my expertise and make referrals appropriately

11. I act on the basis of professional values even when it may result in risk to myself

---

### Professional Duty

Professional duty is the commitment to meeting one’s obligation to provide effective surgical services to individual patients, to serve the profession, and to positively influence the health of society

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. I demonstrate the ethical principle of beneficence (doing good)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I facilitate and encourage patient/colleague achievement of goals for health and wellness</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I preserve the safety, security and confidentiality of both patients and colleagues in all professional contexts</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I am involved in professional activities beyond the practice setting</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. I promote the profession of surgery</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I mentor others in recognizing and achieving their potential</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>7. I take pride in my profession</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

---

### Social Responsibility

Social responsibility is the promotion of a mutual trust between the profession and the larger public that necessitates responding to societal needs for health and wellness

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>1. I advocate for the health and wellness needs of society including access to health care and surgical services</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>2. I promote culture competence within the profession and the larger public</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>3. I promote social policy that effects function, health, and wellness needs of patients and colleagues</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>4. I ensure that existing social policy is in the best interest of patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>5. I advocate for changes in laws, regulations, standards, and guidelines that effect</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>6. I participate in and promote community</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td>service and volunteerism</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>--------------------------</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>I participate in achievement of societal health goals</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I understand current community issues and how they impact our society’s health and well being</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>I provide leadership in the community</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>I participate in collaborative relationships with other health practitioners and the public at large</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>I ensure the blending of social justice and economic efficiency of services</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1  2  3  4  5
Appendix B- SurveyMonkey® Survey

Post PEP Survey

Post Professionalism Education Program Survey

Please take a few seconds to review the components of the Professionalism Education Program and then answer the following questions.

1. Defining Professionalism Session
   a. Accountability
   b. Altruism
   c. Compassion/Caring
   d. Excellence
   e. Integrity
   f. Professional Duty
   g. Social Responsibility

2. Code of Professionalism Tag

3. Crucial Conversations

4. Cinemeducation Session

5. Journal Club Discussion
* 1. What check your gender and residency level.
   - Male Junior
   - Female Junior
   - Male Senior
   - Female Senior

* 2. Please describe a situation in which you have used principles or strategies learned in the Professionalism Education Program. The situation can encompass any of the principles or strategies discussed over the last 6 months, and does not have to be work setting. Please be as specific as you can, but refrain from using names or identifying details.

Please share the details of the situation, the nature of the problem, who it occurred with (partner, child, staff, co worker, family etc). What did you feel you were able to accomplish?

* 3. Who did the professionalism situation arise with?
   
   Other (please specify)

* 4. When did the situation occur?

* 5. Where did the situation occur?
6. Why do you think the issue/situation occurred?

7. Are there any other tools you feel could have helped you deal with this professionalism situation?

   - Conflict resolution course
   - Counseling
   - Personal coaching
   - Mediator
   - Support

Other (please specify)

8. Please rank the components of the Professionalism Education Program in order of most impacting to least impacting.

   - Defining Professionalism session
   - Professionalism Tag
   - Crucial Conversations
   - Cinemeducation session
   - Journal club discussion
9. **Should** this program, or a variation of this program be included in the half-day curriculum?
   - Yes
   - No
   - Some of the components (please comment on which components)
   - Other (please specify)

10. **How has your perception of your own professionalism** changed in the last 8 months?
Appendix C- Consent

Title of Study: Changes in General Surgery Residents' Self Perception of Professionalism Following Introduction of a Professionalism Education Program

Principal Investigator: Dr. Rebecca Whitley, General Surgery, University of Manitoba, Winnipeg, MB, R3T 2N2, (204) 787-3125

Co-Investigator: Dr. Debra Wirtzfeld, Faculty of Medicine, University of Manitoba Winnipeg, MB, R3T 2N2, (204) 787-3125

Sponsor:

You are being asked to participate in a research study. Please take your time to review this consent form and discuss any questions you may have with the study staff. You may take your time to make your decision about participating in this study and you may discuss it with your friends and family before you make your decision. This consent form may contain words that you do not understand. Please ask the study staff to explain any words or information that you do not clearly understand.

Purpose of Study

This research study is being conducted to assess self-perception of professionalism, provide training surrounding the core principles of professionalism, and evaluate this training.

The specific objectives of the study are:

- To evaluate learners’ self perception of professionalism prior to beginning the course
- To conduct a professionalism education program
- To quantitatively and qualitatively evaluate changes in residents’ self perception and use of professionalism training at the end of the education program

*Please note: The professional education program is mandatory for all residents and is being built into the General Surgery resident academic half day. Consent to this study involves participation in the pre and post professional education program surveys ONLY.

Study procedures

Your participation in the study will consist of:
A previously validated pre survey questionnaire of self-perceptions of professionalism (first administration)

A Professionalism education program consisting of:

- A two hour session led by the Associate Dean of Professionalism, University of Manitoba, Samantha Kelleher. The end point will be to define Professionalism as it relates to the General Surgery residents for the 2015-2016 academic year at the University of Manitoba
- Creation of a Code of Professionalism for residents in the General Surgery Residency Program, University of Manitoba, based on the results of the consultative session with Dr. Samantha Kelleher
- Training in Crucial Conversations. This training is meant to enhance outcomes in conversations where opinions vary, stakes are high and emotions are strong
- Selected readings and a journal club discussion on the core principles of Professionalism also led by Samantha Kelleher, Associate Dean of Professionalism at University of Manitoba.
- A ‘Cinemeducation’ session will be held in which the residents will watch a movie incorporating many of the core principles of professionalism. There will be a group discussion after the movie led by Dr Samantha Kelleher, Associate Dean of Professionalism

The same previously validated survey questionnaire will be administered to each General Surgery resident who has consented to the study at the end of the Professionalism education program. An additional question will be included in the post survey, asking residents to detail a situation in which they have used the principles and strategies learned in the training program to achieve a breakthrough in professionalism.

PARTICIPANT INITIALS _______________

You can stop participating at any time. However, if you decide to stop participating in the study, we encourage you to talk to the study staff first.

Dr. Wirtzfeld will provide in-person feedback to students who have taken the course, at their request.

**Risks and Discomforts**

There will be no physical risks to participating in the study. There will also be no nonphysical risks as you are not required to answer any question that you prefer not to answer. Student performance evaluation will not be affected by a decision to participate or not to participate in this study.

**Benefits**

There may or may not be direct benefit to you from participating in this study. We hope the information learned from this study will provide enhanced understanding of Professionalism, which can be used by residents in every area of life.
This training program can be added to your resume.

**Costs**
There is no cost to you to participate in this research.

**Confidentiality**
Study numbers will be randomly assigned to all residents in the General Surgery program by Margaret Shiels, administrative assistant to Dr Wirtzfeld. The principal investigator and supervisor will have no knowledge of participation or lack of participation in the study or have access to the master list of which residents were assigned specific study numbers. Surveys will be placed in manila envelopes labeled with a study number to be administered to the residents by Margaret Shiels. **The questionnaires you complete will bear only your assigned study number and no other identifying data.**

Information gathered in this research study may be published or presented in public forums; however your name and other identifying information will not be used or revealed. Despite efforts to keep your personal information confidential, absolute confidentiality cannot be guaranteed. Your personal information may be disclosed if required by law.

The University of Manitoba Health Research Ethics Board may review records related to the study for quality assurance purposes.

**All records will be kept in a locked secure area and only those persons identified (Dr Wirtzfeld, Dr Whitley, Dr Kelleher and Margaret Shiels) will have access to these records.** Information revealing your personal information, such as your name and email address, will be kept in the office of Margaret Shiels, administrative assistant to Dr Wirtzfeld.

**Voluntary Participation/Withdrawal from the Study**
Your decision to take part in this study is voluntary. You are free to decline or withdraw your participation at any point. You are not required to answer any question that you prefer not to answer.

This consent involves the consent to the pre and post survey questionnaires only. The professionalism education program is being built into the academic half-day curriculum, which is mandatory for all general surgery residents.

**Your resident performance evaluation will not be affected if you choose not to participate in the study.**

**Questions**
You are free to ask any questions that you may have about your rights as a research participant. If any questions come up during or after the study you can contact the investigators by calling:

Rebecca Whitley (204) 787-3125

For questions about your rights as a research participant, you may contact The University of Manitoba, Bannatyne Campus Research Ethics Board Office at (204) 789-3389.

Do not sign this consent form unless you have had a chance to ask questions and have received satisfactory answers to all of your questions.
Statement of Consent

I have read this consent form. I have had the opportunity to discuss this research with the study stuff. I have had my questions answered by them in language I understand. The risks and benefits have been explained to me. I believe that I have not been unduly influenced by any study team member to participate in the research study by any statements or implied statements. Any relationship (such as employer, supervisor or family member) I may have with the study team has not affected my decision to participate. I understand that I will be given a copy of this consent form after signing it. I understand that my participation in this study is voluntary and that I may choose to withdraw at any time. I freely agree to participate in this research study.

I understand that information regarding my personal identity will be kept confidential, but that confidentiality is not guaranteed. I authorize the inspection of any of my records that relate to this study by The University of Manitoba Research Ethics Board, for quality assurance purposes.

By signing this consent form, I have not waived any of the legal rights that I have as a participant in a research study.

Participant signature: _______________________________ Date ___________________(day/month/year)

Participant printed name: _______________________________

I, the undersigned, have fully explained the relevant details of this research study to the participant named above and believe that the participant has understood and has knowingly given their consent

Printed Name: _______________________________ Date ___________________(day/month/year)

Signature: _______________________________

Role in the study: _______________________________

Relationship (if any) to study team members: _______________________________
Appendix D - Structured Interview Questions

1. What does professionalism mean to you? (See below prompt/redirect if definition incomplete)
   (You've alluded to some of the principles of professionalism. For the purposes of this interview, we will define professionalism in terms of: accountability, altruism, compassion and caring, excellence, integrity, professional duty, and social responsibility.

2. How or from whom do you learn professionalism?

3. Can professionalism be explicitly taught?

4a. Where do you see the most unprofessional behaviour at work?

4b. What can you do to improve professionalism in these areas?

4c. What can others do to improve professionalism in these areas?

5. Do you observe situations where you or others are professional in some situations and not in others? Please Explain.

6a. What skills/concepts did you find to be the most beneficial/impacting for you personally at work?

6b. At home?

7. What would you add or take away from the course?

8. How often should the course/specific components be taken?

9. List other courses or areas where you've learned how to improve professionalism

10. What are the risks or downsides of emphasizing professionalism?

11. Do you think professional behaviour should be rewarded? How?

12. What do you do when you realize you've behaved unprofessionally? How do you make it right?

13. Could this course be taught over 3 days, or did you find having it spread out helpful?
Appendix E - Thematic Analysis of Qualitative Survey Responses

#1
A male senior described a situation that occurred with nursing staff at The Children’s Hospital. The nursing staff refused to perform what he felt were specific nursing duties and told him it was his responsibility to perform these same duties. He felt that support would have improved the situation and that the nursing staff should receive more professionalism education. He felt that Crucial Conversations®, Cinemeducation Session, and Professionalism Tag were the most impactful, while the Defining Professionalism session, and journal club discussion were less helpful.

He did not feel that any components of the Professionalism Education Program be integrated into the half-day curriculum. He wrote that if residents didn’t have an understanding of the concept of professionalism by the time they were in residency, the failure had occurred at an earlier point and they would likely not learn how to behave more professionally. He felt that he had come to a better understanding that some professionals view their lack of professionalism as professional.

#2
A male senior described a situation that occurred with a co-resident in the same program during rounds at work. He felt the situation arose related to issues of hierarchy and pride and was frustrated by his coworker having strong opinions about an issue and the fact that they wouldn’t listen to his opinion. He felt that counseling and personal coaching would help future issues.
He felt that Crucial Conversations, the Professionalism Tag, and the Defining Professionalism session were the most impactful, while the Cinemeducation session and the journal club discussion were the least helpful components of the Professionalism Education Program. He did not feel that any of the components should be continued in the half-day curriculum and did not feel that his professionalism had improved much as a result of the program.

#3

A male senior wrote about an evolving situation that occurred multiple times at work with multiple attending surgeons culminating in a long discussion in the office of one of the attending surgeon’s. This resident felt misunderstood about an approach to an ongoing problem, namely because the surgeons didn’t have all of the relevant information about the situation. In the office of the attending surgeon, using some of the skills he’d learned in Crucial Conversations®, he was able to share his perspective, share that he felt he was being portrayed unfairly to other staff, and as a result had been unfairly and inaccurately characterized by several other staff members. He felt that a conflict resolution course and support would have helped the situation further. He felt that Crucial Conversations®, the journal club discussion, and the Defining Professionalism session were the most helpful part of the Professionalism Education Program, and ranked the Professionalism Tag and the Cinemeducation session as less helpful. He did comment that he had been absent for the Cinemeducation session which is why it was ranked the lowest, not because he felt it was unnecessary. He also felt that some components of the program be continued in the half-day curriculum, specifically Crucial Conversations® and the journal club discussion.
He wrote that his self-assessment of professionalism hadn’t objectively changed, but he felt better equipped to interact with his coworkers, and communicate in a non-confrontational manner, specifically using professional language. He wrote that while he hadn’t improved as a person, he thought he had improved as a colleague.

#4
A female junior described an argument with another resident from a different specialty that occurred at work regarding patient care. She felt she was able to advocate for the patient effectively using her newly acquired Crucial Conversations® skills. She felt that it was most effective to find common ground when the focus was brought back to patient care and safety. She felt the situation occurred because of a discordance between resource utilization for patient safety versus for the benefit of society. She felt that further counseling and support would help with future similar situations.

She ranked the Defining Professionalism session, Crucial Conversations®, and Cinemeducation sessions as being the most impactful, followed by the journal club discussion, and Professionalism Tag being the least effective. She also felt that the full program should be continued in the half-day curriculum for General Surgery residents.

She wrote that as a result of the Professionalism Education Program, her interest in the presence or absence of professional behaviour had increased.

#5
A female senior described a situation in which a critical incident took place with a fellow resident from a different specialty surrounding a medical error that put patient safety in jeopardy. She felt
that after taking the course, she was less anxious about approaching the colleague to discuss the situation and how it could have been handled differently. She was careful to keep the mutual desire for work and patient safety as the future goal. She recognized only after taking Crucial Conversations® that difficult conversations are awkward for everyone involved and that this recognition is a key factor in moving forward. She wrote that making the other person feel comfortable enough to be honest and keeping the focus on a main shared goal is the most important thing. She felt that she would be more comfortable having these types of discussions in the future.

She wrote that personal coaching and support would be helpful in similar situations. She ranked Crucial Conversations® as being most impactful, followed by the journal club discussion, the Defining Professionalism session, the Professionalism Tag, and lastly, the Cinemeducation session. She wrote that some aspects of the Professionalism Education Program should be integrated into the half-day curriculum. She felt that particularly the Crucial Conversations® was important to continue offering, as well as resident self-reflection and self-improvement components. She felt that these 3 components would allow for improved resident insight into whether their behaviour was professional or unprofessional.

She wrote that her perception of professionalism hadn’t changed throughout the course, but that her awareness of professional and unprofessional behaviour had improved. She also felt that her ability to deal with situations where other people behaved in an unprofessional manner had improved.

#6
A female junior wrote that in an altercation with a colleague in the same specialty, the colleague intentionally misinterpreted the situation to an attending, altering the details in their favour. The junior resident recognized that this would have a negative impact on their career as well as with the colleague. She approached the colleague and let them know their behaviour was unprofessional and could they discuss what happened so as to improve their future working relationship.

This resident felt that further courses and instruction in conflict resolution would be helpful for similar future events. She felt the Crucial Conversations® course was the most beneficial, followed by the Defining Professionalism session, the Professionalism Tag, the journal club discussion, and lastly, the Cinemeducation session. She also felt that the program should be continued in the half day curriculum in the future. She wrote that the Professionalism Education Program helped her remember what was considered professional behaviour and cited the specific examples of being on time, not gossiping, being polite, even with aggressive people, and utilizing proper channels of communication.

A female senior wrote that she had a conflict related to professionalism with her next door neighbor over some property damage. She wrote that through reflection of the situation, recognizing consequences of angrily addressing the damage with the neighbor, and thinking about common goals, she was able to calmly discuss the situation. The main question she was able to ask herself was ‘what do I really want out of this?’ They were able to have an effective and friendly dialogue about how the damage had happened and the neighbor was very apologetic. Instead of making a next door enemy and worsening an awkward situation, she was able to make a friend who often helps out with yard duties while she is on call. She cited
misunderstanding as the main reason for this professional conflict and felt that a conflict resolution course and personal coaching would have been helpful in the resolution.

She felt that the Crucial Conversations® course was the most impactful component of the Professionalism Education Program, while the professionalism tag was the least impactful. She felt that Crucial Conversations® training should be continued in the half day curriculum. She wrote that she has a deeper awareness of how her behaviour has both positively and negatively affected the culture of professionalism around her. She felt that the improvement of professional identity requires reflection and self-reflection.

A female junior wrote that she had an issue with an OR nurse, who she felt was obstructive to learning opportunities. The resident wrote that this felt consistent with other nursing staff and although they made their opinions clear, she and the staff surgeon continued to operate. She was able to stay calm, refusing to engage this specific nurse in her frustration understanding that she had to maintain a collegial working relationship. The resident felt that frustration, burn out, time constraints, and the power struggle that comes with a hierarchical culture were the core issues contributing to this conflict. She felt the most helpful resource in this situation would have been a mediator. Interestingly, she did not mention whether the staff surgeon, who was present during the multiple conflicts, spoke up to mediate the situation. She felt that the journal club discussion was the most impactful part of the Professionalism Education Program, and that the Cinemeducation® session was the least impactful. She felt that the only some parts of the education program should be continued, more specifically the journal club discussion in a small
group setting. She felt that the course encouraged her to be on time and prepared for teaching sessions.

#9
A female junior wrote that she was ‘snapped’ at by a resident in a different specialty regarding ‘micromanagement.’ She felt that because patient safety and care was her first priority, it was her responsibility to follow up on things. Instead of arguing and excusing her behaviour, she was able to apologize immediately recognizing that 4am was not a helpful or rational time to have that discussion. She was able to understand why the other resident was frustrated. She cited being able to ‘look at the big picture rather than listening to…primitive emotions to argue back.’ Interestingly the discussion took place in the stairwell as they were passing by each other in an ‘off the record’ manner. She cited stress, lack of communication, and unclear expectations as the fuel for the professional conflict and felt that a course in conflict resolution would have been helpful. She felt that the Crucial Conversations® course was the most impactful, while the Cinemeducation® session was the least impactful. She felt the program should be continued in the half day curriculum and wrote that the principles incorporated in professional behaviour are not innate but need to be developed. She felt the residency programs were responsible to facilitate this development.

#10
A male senior wrote that the most recent professional conflict occurred with his spouse but declined to comment on the situation except that it involved his in-laws. He felt it occurred
secondary to poor communication on his part and felt that a conflict resolution course would have been the most helpful resource in that situation. He cited Crucial Conversations® as being the most impactful, while the journal club discussion was the least impacting. He felt the program should be continued in the half day curriculum, but did not feel his self-perception of professionalism had changed as a result of the program.

#11
A female junior wrote that she had a conflict with another resident in the same specialty over team management and OR opportunities. She felt there was a power struggle with the other resident. She cited differing expectations as the causative factor and felt that the most helpful resources for her situation would have included a course in conflict resolution, personal coaching, and mediation. She felt that the Cinemeducation® session was most impactful while the professionalism tag was the least impacting. She felt that some of the components should be continued in the half day curriculum and found the course ‘thorough’ and felt that it opened her eyes to ‘unspoken topics.’

#12
A female junior wrote that she had an issue with another surgical specialty about the appropriateness of an admission to their service. A compromise was struck with the resident from a different specialty whereby she would admit the patient but would transfer the patient to the other service in the am after the OR. She felt that misinformation about the role of the trauma service was responsible for the lapse in professionalism and felt that support would have been
the most helpful resource in her situation. She felt that the defining professionalism session was
the most helpful, while the Cinemeducation® session was the least helpful. She felt that the
program should be continued in half day, and that she was more aware of how her actions were
perceived.