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A Conceptual Model for Teaching Social Responsibility and Health Advocacy: An Ambulatory/Community Experience (ACE)

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Abstract

Background: At a macro level, Social Responsibility and Social Accountability are explicit priorities for medical schools in Canada and internationally, although the advancement of this vision is still developing. At a micro level, Health Advocacy is important for physicians-in-training as well as practicing physicians. The conceptual model being proposed is that Social Responsibility is connected to mastering Health Advocacy. The University of Toronto Faculty of Medicine has 16 years of experience through a mandatory 4th year clerkship course entitled the Ambulatory/Community Experience (ACE) which from inception emphasized Social Responsibility and Health Advocacy. The objective of this retrospective study was to provide a model to support the acquisition of Health Advocacy and the development of socially responsible medical students.

Methods: A conceptual model with three distinct elements: 1) ambulatory/community placements, 2) individual pedagogical approaches, and 3) narrative, reflective assignments was applied.

Results: The three elements of the model, all based on the five ACE learning domains (objectives) and embedded in CanMEDS type competencies, are effective and appear to support achievement of competency in Health Advocacy.

Conclusion: A model which includes vetted ambulatory/community placements, individual pedagogical approaches, and narrative reflective assignments based on objectives with a Health Advocate perspective appears to encourage Social Responsibility in medical students.

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Introduction

Social Responsibility and Social Accountability

The World Health Organization (WHO) defines the Social Accountability of medical schools as: "the obligation to direct their education, research and service activities towards addressing the priority concerns of the community, region, and/or nation they have a mandate to serve."[1]

Medical schools whose programs fulfill this obligation are said to be socially responsible.[1] A literature review by Banack[2] found many articles acknowledging that medical schools have a social responsibility and should be proactive in shaping a more socially accountable and equitable health care system. In the recent report on *The Future of Medical Education in Canada,* AFMC, as the **first** of ten recommendations noted that "Social responsibility and accountability are core values underpinning the roles of Canadian physicians and Faculties of Medicine."[3] The report discusses different aspects of social responsibility, such as developing models of distributed medical education to address the health care needs of patients living in rural and remote communities, supporting medical students and faculty in community advocacy and providing students with opportunities to learn in marginalized communities.

The study that follows differentiates Social Responsibility and Social Accountability. Social Responsibility is the conduct of both students and medical schools in understanding their obligations to serve society. Social Accountability is the action taken to ensure transparency and measure the success or failure of achieving the Social Responsibility objective.

CanMEDS Health Advocate

The term Health Advocate first formally entered the lexicon of Canadian medical education and practice in May 1992 through the Educating Physicians for Ontario (EFPO) project.[4] At the same time as this project was unfolding, the College of Family Physicians and the Royal College of Physicians and Surgeons, the Canadian licensing bodies for family physicians and specialists respectively, were engaged in their own reviews in response to calls for greater accountability, a change in consumer demands, changes in health policy, and the delivery of health care in Canada. Health Advocacy became an implicit competency for both licensing bodies.[5,6] The key elements of the CanMEDS Health Advocate competency are directed at physicians responding appropriately to the health needs of the community they serve and promoting the health of individual patients, communities, and populations.

The Ambulatory Community Experience (ACE)

Initiated in 1995, The Ambulatory Community Experience (ACE) is a University of Toronto, Faculty of Medicine, final year mandatory core curriculum clerkship course with 90 distributed sites in all disciplines throughout Ontario. Initially a 5 week experience, ACE conceded one week to provide the Determinant of Community Health Course (DOHC), with a one week didactic course immediately preceding ACE. Thus ACE became a 3 to 4 week (depending on the rotation during the academic year), 40 hours/week clinical experience with principally a 1 to 1 student/supervisor ratio.

An important influence on the design of ACE was a project called Educating Future Physicians for Ontario (EFPO).[4] EFPO recommended that students spend time in the community to be exposed to community conditions and resources and the needs of the underserved. The ACE curricular framework hinged on five major learning domains based on the EFPO recommendation and a review of key papers.[7-17] These five major learning domains were required to be met across all site placements irrespective of setting or medical discipline. The word domain was used because each learning domain incorporated 5 learning objectives to support guided customization of objectives by the learners (see Appendix 1).

The organizational structure of ACE as a clerkship rotation was unique, as it was not departmentally based but UME based, thus allowing greater flexibility. The ACE committee, chaired by the ACE Course Director, annually reviewed all aspects of ACE in light of new directions in medical

education, such as the introduction of CanMEDS competencies and the increasing emphasis on social responsibility. Because ACE was based, from its inception, on the social responsibility values of EFPO, however, only minor changes needed to be made over the years to keep abreast of these new directions.

1. Ambulatory/Community placements

Sites were categorized under ambulatory (ambulatory clinics in partially or fully affiliated teaching hospitals) or community (non-academic, rural settings). Although most of the sites were originally recruited through Chairs and Division Heads at the Faculty of Medicine, students also contributed many suggestions for ACE sites. Sites used in ACE completed an application based on the learning domains to ensure that sites were aware of their commitment when taking on ACE students. All site applications were reviewed by the ACE committee prior to inclusion in the ACE catalogue from which students chose their placements. Additionally, the ACE committee reviewed all student comments regarding ACE placements on an annual basis to ensure that the sites supported the desired outcomes. Over the years, less than 1 % of sites were removed from the catalogue of experiences because they did not meet ACE requirements. The majority of sites have been a stable offering in the catalogue of ACE experiences since inception.

2. Individualized pedagogical approaches

Distributed medical education programs such as ACE result in a dynamic individualized curriculum. Therefore, it is crucial to develop learning objectives that connect the learning experience to planned outcomes, and to structure these experiences with practices that encourage consistency and comparability of experiences. All aspects of ACE were based on the five learning domains. Both students and their preceptors signed a learning agreement focusing on the five learning domains while allowing guided customization (through the objectives under each domain) to meet student needs and site conditions. A learning agreement is an individualized pedagogical tool to document expectations and encourage student ownership of the learning objectives.[18]

3. Narrative reflective assignment

The ACE narrative reflective assignments were intended to focus students on the learning domains. The assignment consisted of an introduction describing the ACE setting, an analysis of the determinants of health, identification of one common social or health feature in the community served, thus necessitating students' knowledge of the community of their ACE placement. The introduction was followed by a case write-up which involved applying the five ACE learning domains to one patient to demonstrate that the student understands how these learning domains can be applied in everyday medical practice. In the conclusion, students reflected on their ACE experience and how it may affect future actions. The narrative, reflective assignment was designed to promote active learning by encouraging discussion, critical reflection and writing about the ACE experiences.[19,20] It was marked by a core faculty group from the ACE committee using a marking tool to support inter-rater reliability.

The retrospective study discussed in this paper is part of a larger study of ACE. The component discussed here was undertaken to ascertain the effectiveness of ACE in supporting the acquisition of the Health Advocate Competency and Social Responsibility in students. The overall study was approved by the University of Toronto Health Science Research Ethics Board.

Methods

A review of 9 years of student site evaluations was undertaken to determine whether the ambulatory/community placements supported the acquisition of ACE objectives. This procedure was followed by a review of student learning agreements for one year to identify whether students customize their learning agreements or adopted the standard learning agreement. Finally, the narrative reflective assignments completed by 60 ACE students representing about 30% of the 204 final year 2008/09 medical students, were

reviewed and a thematic analysis of Health Advocate activities described in these assignments was undertaken. This component was the primary focus of the research.

Procedures

To select the 60 narrative reflective assignments from the overall sample of 204 for thematic analysis, probability sampling including both stratified and random sampling were used to diminish selection bias error. The 204 assignments were already organized in five blocks spanning the academic year. First, each assignment was labeled with a letter designation in place of student names. Because ACE offers both an ambulatory (ambulatory clinics in partially or fully affiliated teaching hospitals), and a community (community, rural settings) experience, stratified sampling was used. The labeled assignments were then divided into ambulatory and community groups. For each of these two groups, the lettered identifiers were entered into an EXCEL spreadsheet. Using the function =RAND(), random numbers were generated for each assignment and groups were subsequently sorted by the random number. This yielded 2 lists (ambulatory and community settings) rearranged in random order and the first 6 assignments in each category were selected for analysis. This process was repeated for each of the 5 blocks until 60 assignments were selected for analysis, 12 from each block, of which 6 were assignments of students who had a community experience and 6 from students who had an ambulatory experience. Assignments were not stratified for gender, as a brief review of this variable did not highlight any significant differences.

The assignments were labeled so that numbers (1 to 5) correspond to blocks 1 to 5 spanning different times of the academic year from block 1 beginning October 6th to block 5 beginning March 23rd. The letters A to L refer to the 12 students in each block.

The principal investigator and research assistant each read the 60 student assignments and independently recorded the elements that students identified as Health Advocate activities. Subsequently, a number of meetings took place to compare, discuss and categorize the emerging themes. Where there were discrepancies, these were discussed until a consensus was reached. From this work emerged descriptions and categorizations of Health Advocate activities that students viewed as important, which were in line with the elements of the CanMEDS Health Advocate Competency.

Results

Ambulatory/community placements

The descriptive statistical analysis of nine years of student evaluations indicated that over 90% of students found the ambulatory/community placements supported them in meeting their ACE learning objectives. (see Appendix 2**)** The thematic analysis of these same evaluations showed well over 90% positive comments such as: “best placement in medical school”, “awesome” and “invaluable”. Students enthusiastically supported a clinical experience away from the in-patient teaching hospital environment: “one of my best and most memorable clerkship rotations with exposure to the ambulatory setting (something that medical students have limited exposure to)” Less than 10% of comments were negative and these usually were that the experience did not meet expectations and dislike of the narrative reflective assignment.

Individual pedagogical approaches

Students demonstrated that they were supportive of individualized pedagogical approaches. A full 97% chose to customize their learning agreements based on their ACE ambulatory/community placement and their learning needs. The customization still retained the focus on the ACE learning domains since students picked at least one objective from each of the 5 ACE learning domains. By individualizing their learning objectives and choosing their ACE placements from a catalogue of experiences in all disciplines, students created an individual curriculum. Of interest is that students in community settings tended to add additional specific objectives such as focusing on health promotion activities and/or

understanding the needs of marginalized groups such as Aboriginal peoples, immigrants, and underserved communities.

Narrative reflective assignment

In the narrative reflective assignments, the Health Advocate Competency deemed difficult to define, understand, recognize and teach[21-27] was described by ACE students with great clarity and deftness. Ninety-three percent (93%) of students in community placements commented about Health Advocate activities they witnessed, participated in, or identified as part of their future. In ambulatory academic settings, this percent dropped to 73 %. In addition to individual Health Advocacy such as councelling on smoking cessation and promotion of sunscreen use, students described Health Advocacy as calls to consultants to advocate on behalf of patients, social workers to access housing, and paperwork to support applications to the Workplace Safety and Insurance Board (WSIB) or transportation allowances. Student 3 H notes "We helped Mr. V apply for disability, additional funding for a special diet, and assistance for transportation to and from medical appointments". Fundamental to discharging this Competency was the need to be aware of community resources and community issues such as the impact of the recession on a particular industry, the effect of plant shutdowns and the type of environments their patients experienced at work and at leisure. Oandasan[25] comments that there is little in the literature about physicians' roles as community advocates while Earnest et al[27] speak of the paucity of formal advocacy training. However, ACE students in meeting the objectives of learning domain #5 "developing an understanding of the potential impact of the community on patient care" were able to focus on community advocacy. Student 1 J notes "One of the big issues in {community} is the role of the recession on the automotive industry and plant shutdowns. It is important for physicians to understand what is going on and the type of working environments their patients are experiencing". Student 4 K comments "There is an opportunity here to ensure that Mr. D's employer is protecting him and the other employees with proper safety equipment". These comments resonate with Earnest et al.'s [27] public (community) approach in which they note that "physicians are poised to delineate the links between social factors and health". Education was also seen as part of Health Advocacy as a mechanism to empower patients. Student 5 A said "Physicians have the opportunity to empower their patients to improve their quality of health by providing them with knowledge". In Table 1, themes and additional representative quotes are offered as evidence of attainment of competency as a Health Advocate. There did not appear to be a difference in the quality of the quotes whether students where in ambulatory or community settings.

The conceptual model linking Health Advocacy and Social Responsibility is illustrated in Figure 1. It outlines how the Social Responsibility mandate of the undergraduate medical education (UME) curriculum is addressed through ACE where students are immersed in ambulatory/community placements having customized their individualized learning agreements based on the ACE learning domains as they reflect in their narrative reflective assignments about Health Advocacy and Social Responsibility, providing tangible evidence that the medical school has addressed its Social Responsibility mandate.

Validity

Internal Validity

a) Site Supervisors (the name given to ACE faculty) provided corroboration of the findings described above through their evaluation of ACE students. In terms of practicing Health Advocacy, 85% of students were evaluated as exceeding expectations or outstanding, with descriptive comments such as "the student offered intensive and out of the ordinary help for difficult patients". The evaluation uses a 5 point scale with exceeding and outstanding as 4 and 5 respectively.

b) Annually, for 16 years, the ACE committee has reviewed all student comments about their ACE placements and found that students

Table 1: Selected Evidence of Understanding and Internalizing Health Advocacy

CanMEDS competency	Theme	Representative quotes
Health Advocate	Individual level	"I realize how important it is to use the emergency interactions I had to educate and advocate for patients who have difficulty accessing our health care system due to their language barrier." *(1E ambulatory placement)*
		"Physicians can't realistically affect cost of food but can offer feasible alternatives choices of low cost meals, smaller portions and tips on how to increase physical fitness as incorporated into daily life." *(1A ambulatory placement)*
		"Advocacy was in helping get a patient moving through the WSIB process after a back injury. In that situation, it can be easy to get lost in the bureaucratic and legal overtones and I hope to remember that my focus needs to remain on the patient and their best interest." *(5L community placement).*
		"We advocated for the newborn by requesting [the organization] ensure that he be transferred to different caretakers if the current foster parents were unwilling to remove the cats from their home." *(1H community placement)*
	Community/population level	"I realized the value of reflecting on the features of the population you serve as a physicians….when you look at the commonalities in the population you are able to identify factors which impact their ability to live a healthy lifestyle. Once you have identified the needs in the community, you can advocate on behalf of your patients for health promotion issues." *(4C ambulatory placement)*
		"It behooves physicians…to be informed about community resources, and to take an active role in the political process by supporting public servants and politicians who advance good health related policies." *(1F ambulatory placement)*
		"It is important to recognize that immigrant women may not be aware of how to access the health care system and require additional guidance and advocacy." *(2K community placement)*
		"Due to their position, physicians are in a unique position to identify the effects of the environment on people's health and to advocate for better environmental standards." *(3K community placement)*
	Education as an element of Health Advocacy	"Physicians can help this population of patients by educating communities and schools …so that teachers, other families and children are aware of this condition and do not isolate or discriminate the child because of it." *(1C ambulatory placement)*
		"Educating patients on preventative measures, counselling on eye protection, quitting smoking, or wearing seatbelts may help them more than any treatment you can provide." *(2D ambulatory placement)*
		"I have found that educating the patients empowers them and makes them less anxious." *(2H community placement)*

Figure 1. Conceptual model for teaching Social Responsibility and Health Advocacy

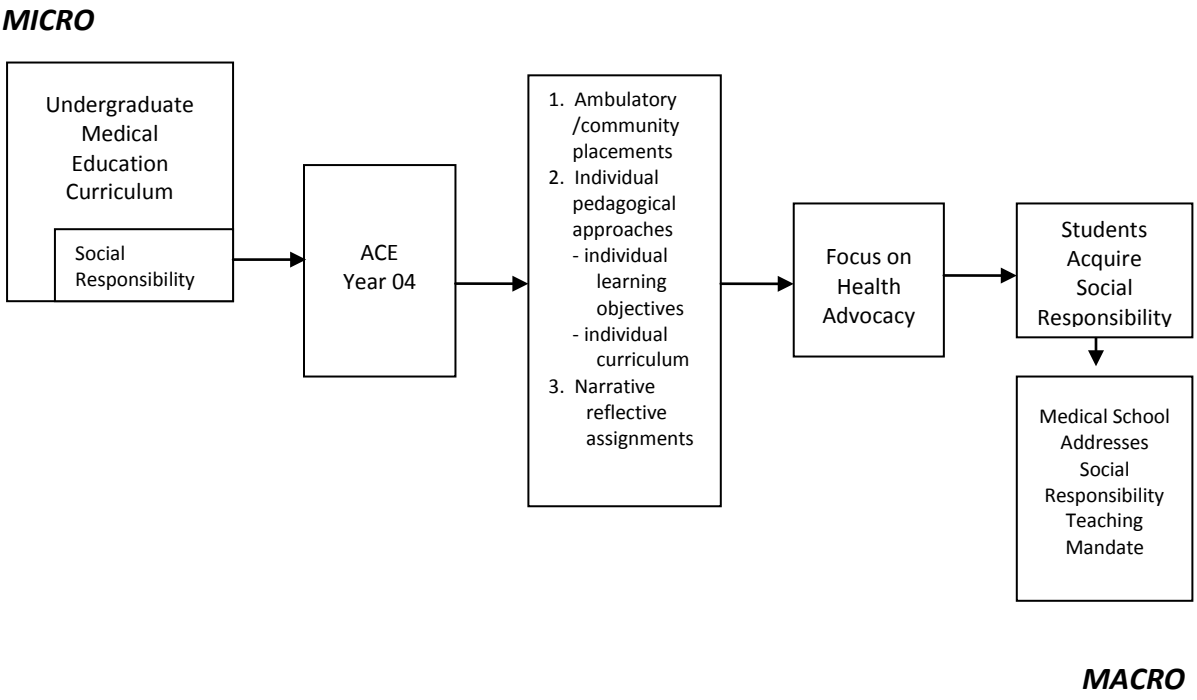
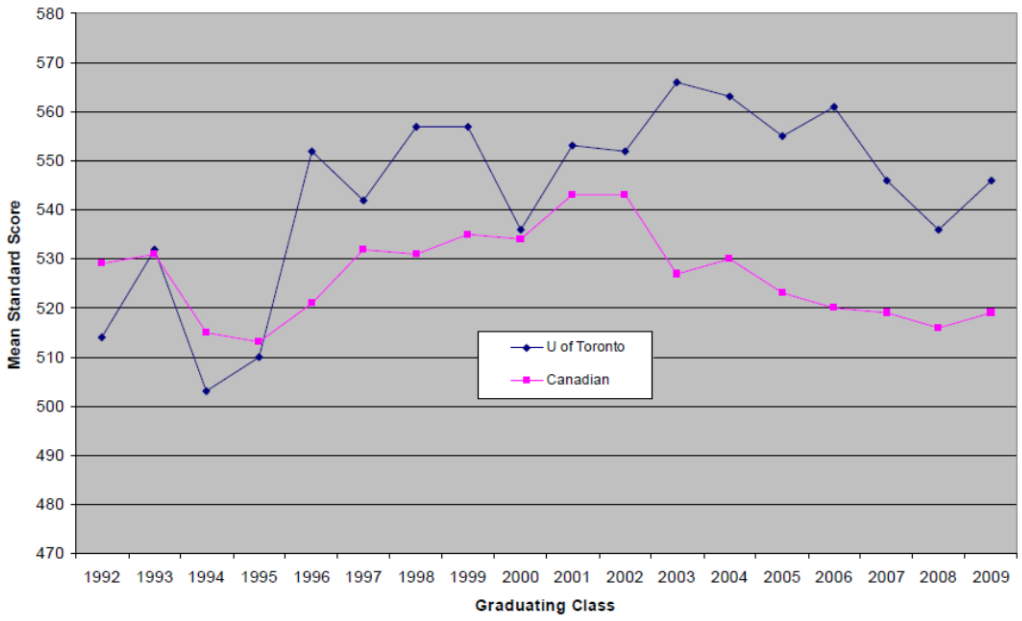


Figure 2. MCCQE results on Population Health & Preventive Medicine for medical graduates from University of Toronto compared to all Canadian medical graduates



Source: UMEPEC Annual MCC1 Report. Figure 5: Medical Council of Canada Qualifying Examination – Part I: University of Toronto, 1992-2009 PREVENTIVE MEDICINE & COMMUNITY HEALTH. Used with permission.

overwhelmingly perceived that ACE sites supported them in meeting their learning objectives.

External Validity

The Medical Council of Canada qualifying examinations (MCCQE) results indicate that since 1995, Toronto students' mean score has exceeded that of all Canadian medical graduates on the Population Health and Preventive Medicine domain [28] (Figure 2). 1995 was the graduating year for the first cohort of medical students in the new curriculum at The University of Toronto. The Population Health results in Figure 2 are unique to this domain. While much of these results can be attributed to the four year longitudinal Determinants of Community Health Course (DOCH), these results may also be attributed to ACE, in that this course was designed and inaugurated in 1995 to integrate and reinforce, in a clinical setting, the principles learned in DOCH.

Discussion

The WHO[1] states that medical schools which direct their education, research and service activities *towards the priority needs of their community or region are said to be socially responsible.* The key elements of the Health Advocate Competency speak of *physicians responding to the health needs of the community they serve and promoting the health of individual patients, communities and populations.*[5] Thus if trainees are taught how to be Health Advocates, medical schools will be providing the educational and curricular components of Social Responsibility. Applying the conceptual model discussed in this paper including 1) using only ambulatory/community placements which have agreed in their application forms to support the ACE learning objectives and vetting these sites annually to ensure compliance to this commitment, 2) allowing each student to tailor their individual pedagogical journey within the 5 ACE learning domains, and 3) requiring a narrative reflective assignment focused on the ACE learning objectives, appears to yield the desired outcomes.

The review of the assignments found that 93% of students in community settings versus 73% of students in ambulatory sites based in academic settings discussed Health Advocacy. This finding may suggest that being immersed in a community supports experiential learning about that community and community advocacy work. The literature suggests that to be meaningful, advocacy should be grounded in professional work.[27, 29, 30] A comment from student 2I (who was in a community placement) is illustrative of this point: "Although I had been taught this before, I now feel more aware of the challenges that the underserved population faces in terms of their health. I see how they present differently to the health care system…".

Social Responsibility involves developing models of distributed medical education, providing students with opportunities to raise awareness and learn in marginalized communities[31] and incorporates discussions related to the shortage and suboptimal deployment of physician resources outside of metropolitan areas.[3,31] A study by Walker et al.[32] of 42 primary care physicians stated "Our findings that none of the physicians who trained in a non-underserved setting went to work in an underserved setting underscores the importance of training in underserved locations as a predictor of long-term practice in such settings." In reviewing 24 years of a rural based medical education program, Maudlin and Newkirk[33] found that graduates in rural residency programs are three times more likely to practice in these settings. The Robert Graham Centre[34] recommended substantially shifting more training of medical students and residents to community, rural and underserved settings since "rural, inner-city and underserved population clerkships and electives are associated with profound changes in students' ultimate specialty and location of practice." The Global Consensus for Social Accountability of Medical Schools[35] suggests that students should be offered early and longitudinal exposure to community based learning experiences to understand and act on health determinants.

The literature suggests that medical schools should have a number of core rotations in under-served/marginalized community settings to raise awareness of the needs, support social responsibility and community advocacy and encourage return of students to these practice environments. The present study provides one example of how this can be structured.

This study of ACE has limitations since it was done over one year and thus may not be replicable as it is

time specific. Additionally, it does not provide comparative evidence of Social Responsibility and Health Advocacy in other disciplines such as Medicine or Surgery. Despite these limitations, this research contributes to our understanding of how to teach Social Responsibility and Health Advocacy in a number of important ways. First, it supports the conceptual model linking Health Advocacy and Social Responsibility. Second, it provides evidence that the appropriate sites, individualized pedagogical approaches and the use of narrative reflective assignments focusing on a patient population are effective means to learn about these concepts. Whether this is enough for students to develop a sustainable professional commitment to Social Responsibility requires more research. Third, the results also suggest that although Health Advocacy can be learned in academic and community settings, it is more easily learned if immersed in a community setting. Future studies might include a review of the number of graduates who go on to primary care practice settings in under-served/marginalized environments after exposure to these sites during their undergraduate education.

Acknowledgements

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Appendix 1. Examples of Site/Learner Specific Objectives Within Each of the Five Learning Domains

1. Develop and enhance clinical problem-solving skills in the context of an ambulatory setting:
(Medical Expert/Professional/Scholar)

1.1 develop skills of history taking for the ambulatory patient, with appropriate emphasis on breadth of content, relevant context, and risk appraisal
1.2 practice skills of physical examination
1.3 acquire the ability to develop and test diagnostic hypotheses
1.4 gain experience in the utilization and interpretation of diagnostic tests and procedures
1.5 retrieve, analyze and synthesize relevant and current data and literature to help solve clinical problems

2. Develop and enhance patient management skills in an ambulatory setting:
(Medical Expert/Communicator/Collaborator)

2.1 develop and execute therapeutic plans for patient management
2.2 participate in the referral and consultation process
2.3 assess compliance to treatment and take appropriate actions based on this assessment
2.4 communicate effectively with patients, their families and the community, respecting the differences in beliefs and backgrounds
2.5 participate in continuity of patient care

3. Develop and apply basic principles of health promotion and disease prevention:
(Medical Expert/Health Advocate/Communicator)

3.1 develop a knowledge base about factors that may impact on health and communicate with patients, parents or guardians about issues regarding health promotion
3.2 identify patient risks on a case by case basis and counsel patients, parents or guardians on the early identification and prevention of disease and injuries
3.3 gain experience in the use of appropriate screening tests
3.4 develop an understanding of the natural history of common diseases and injuries
3.5 learn an approach to evidence based and cost effective screening in the ambulatory care setting

4. Develop and reinforce professional behaviours/skills:
(Collaborator/Communicator/Manager)

4.1 develop skills of communication with the ambulatory patient, the patient's caregivers/family, and members of the inter-professional health team
4.2 demonstrates the importance of cooperation and communication among health professionals
4.3 enhance inter-professional relationships by understanding and respecting the roles and expertise of all members of an interdisciplinary team and by participating in interdisciplinary teamwork
4.4 develop practice management skills, related to provision of health care in an ambulatory setting
4.5 learn to practice cost effective medicine.

5. Develop an understanding of the potential impact of the community on patient care
(Health Advocate/Collaborator)

5.1 access relevant community resources and work with other community health professionals
5.2 gain knowledge of important issues in the local community and the impact of these issues on individual health
5.3 develop an awareness of the physician's social responsibility with respect to environmental and community issues, which impact on health care
5.4 develop an awareness of the impact of resource availability and resource applications in patient care
5.5 develop an understanding of how public policy and public health issues impact on individual

Appendix 2: Excerpts from Student Evaluations

Year	2001/02		2002/03		2003/04		2004/05		2005/06		2006/07		2007/08		2008/09		2009/10	
Number of responding students	153 (93%)		145 (100%)		161(86%)		179 (95%)		189 (98%)		189 (93%)		184 (97%)		193(94%)		215 (96%)	
Total Number of students	165		179*		188		189		192		203		190		205		224	
This rotation provided opportunities to:	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Develop and enhance clinical problem solving skills in ambulatory settings (medical expert/professional/scholar)	151	2	143	2	161	-	174	4	188	1	186	3	182	2	190	2	215	1
Develop and enhance patient management skills in the ambulatory setting (medical expert/communicator/collaborator)	151	2	143	2	159	2	176	3	186	3	187	2	181	3	190	3	209	6
Develop and apply principles of health promotion and disease prevention from the perspective of the practicing physician (medical expert/health advocate/ communicator)	141	12	133	12	153	8	167	10	180	8	183	6	181	3	189	2	212	3
Develop and reinforce professional behaviours/skills (collaborator/communicator/manager)	151	1	141	3	160	-	167	10	189	-	186	3	184	-	192	1	215	-
Develop an understanding of the potential impact of the community on patient care (health advocate/collaborator)	142	11	136	9	149	10	166	12	182	7	182	7	175	9	188	5	210	5

* 34 students in Block 6 did not have an ACE rotation due to the SARS pandemic.