Evolution of Interprofessional Learning: Dalhousie University's "From Family Violence to Health" Module

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Abstract

At Dalhousie University, interprofessional (IP) learning modules are used to help future health care professionals learn to work together in resolving complex problems. One module, "From Family Violence to Health," features the role of dental professionals. This paper describes the evolution of this module from the year 2000. By February 2003, 1,182 students from 15 health care professions had completed the module. Qualitative evaluation in years 1 and 2 of the program (2000 and 2001) revealed that, before participating in the IP module, many students were able to identify a role for themselves in the recognition of family violence and knew their responsibility to report incidents. However, after participating in the module, they had a greater understanding of the reporting of family violence, a more comprehensive and supportive perspective, increased recognition of how health care professionals could work together and improved awareness of the roles of other professions. In a quantitative evaluation in year 3 (2002), mean student ratings on a scale of 1 to 5 indicated that the IP module was relevant (4.2), increased their understanding of family violence (4.0), and had some impact in promoting IP learning (3.8). As health care delivery becomes more focused on care teams and system thinking, the provision of IP training is expected to increase. The Dalhousie University IP modules (available at http://www.dal.ca/~fhp/ipl/index.html) address health and social problems for which it is critical that health care and other professionals work together. Feedback from practitioners on the development of IP education is welcomed, particularly with regard to the IP module addressing family violence.

MeSH Key Words: *domestic violence; education; interprofessional relations; students*

© J Can Dent Assoc 2003; 69(10):658
This article has been peer reviewed.

More than half of the injuries caused by family violence are to the head and neck region.[1,2] Therefore, dentists and dental hygienists are in a unique position to detect these injuries and report cases of potential family violence. Their responsibility to intervene has been recognized for more than 20 years[3] but, unfortunately, they tend to not report cases.[1] This problem also occurs in other professions, and the underreporting of abuse and the effects of family violence remain a concern, even though the "battered child syndrome" was reported in the medical literature more than 40 years ago.[4]

Education on managing family violence has been advocated for students in dental professions for more than 15 years[5] and is now usually provided.[6] However, the extent and value of this "uniprofessional" approach to addressing a complex, societal problem is not well documented. Furthermore, uniprofessional educational silos have fostered turf protection and isolation, rather than an integrated system of health care provision that can address the challenges of complex health problems such as family violence.

Patients affected by family violence may be seen by numerous types of health care professionals. However, because of a lack of integration among professions, these care providers may fail to communicate with each other, which can mean that abused people "slip through the cracks" and do not receive appropriate, early intervention.

The need for health care professionals to work collaboratively is now recognized.[7–10] Specifically, dental professionals should work with physicians to increase the prevention, detection and treatment of child abuse and neglect.[11] To meet this need for collaboration in practice, the education of health care professionals must evolve. Collaborative practice is best developed through interprofessional (IP) learning,[12] where students from a variety of health care professions meet with the common purpose of understanding each other's perspectives. Since the mid-1990s at Dalhousie University in Halifax, Nova Scotia, faculty have been developing, implementing and assessing IP learning modules to enhance the ability of future health care professionals to work together more effectively.[13]

This paper describes the IP approach that Dalhousie University is taking to prepare students to address domestic violence and other complex health problems, shares the results of evaluation and invites critique. More specifically, the paper describes the design, evolution and results of evaluation of an updated "From Family Violence to Health" module within the IP learning program at Dalhousie.[14]

IP Learning at Dalhousie University

Since 1996-1997, the delivery of IP learning modules at Dalhousie University has included all units in the Faculty of Health Professions at Dalhousie University,[13] specifically, the College of Pharmacy and the Schools of Nursing, Physiotherapy, Occupational Therapy, Human Communications Disorders, Health Services Administration, Social Work, and Health and Human Performance. In 1999, participation was extended to the Faculties of Dentistry and Medicine.

Dalhousie's IP modules are designed to allow students to learn and develop skills and strategies for working effectively with other professionals, colleagues and clients/patients to address complex problems and issues, and to help students develop an awareness of, and respect for, the expertise, roles and values of other professionals, colleagues and clients/patients.[14] On completing the IP module that is the focus of this paper, students are expected to be able to recognize indications of family violence that may be expressed within the health care setting, describe the diversity of professional roles in addressing family violence and identify ways to work interprofessionally to overcome family violence and achieve optimal health.[14] In the context of this module, family violence is defined as an abuse of power within relationships of family, trust or dependency. It always involves someone using his or her power over another person in a way that is hurtful.[15]

Dalhousie IP learning commences in the first year of professional education with 2 teamwork IP modules; these modules are adaptations of material from a program at the University of Alberta, where IP learning is a required core course for all undergraduate health care professionals.[16,17] At Dalhousie, IP learning is not a stand-alone course but rather is structured as required hours in existing courses. The IP module described here is designed to complement, not replace, existing family violence content. In their upper years, students participate in 3 advanced IP modules: "From Family Violence to Health," "Disability" and "Palliative Care." The advanced modules draw upon the expertise of faculty and resources in the health care system. The modules present complex problems requiring IP teamwork for solution. Awareness of the role of the student's own profession is enhanced, and he or she gains a new appreciation for the variety of expertise and values found within all health care professions.[13]

In 1999, when the Faculties of Dentistry and Health Professions began planning to have their students learn together, the module on family violence was undergoing major revision. The goal of the initial module was to increase awareness of spousal abuse. Most students in Health Professions are women, and the male students expressed concerns regarding perceived and actual "male bashing" that occurred on occasion during the delivery of the early versions of the module. Therefore, a new module was developed that focused on child abuse. This new module was grounded in the fact that the dental professions have a critical role in the identification and resolution of incidents of possible family violence,[5,18–21] especially child abuse. Initially, virtually all students in nondental health care professions lack an understanding of the important role of the dental professions in identifying potential abuse. This knowledge gap provided an appropriate, and uncontentious, starting point for new learning.

The revised family violence module was framed in a dental setting to dispel unhelpful preconceptions that had plagued earlier versions of the module, which had focused on stereotypical views of spousal abuse. For the new IP module, the first case study that was developed related to potential child abuse, defined as mistreatment by a parent, guardian, caregiver or other significant person in a position of trust that results in injury or significant emotional or psychological harm to the child.[22] This was the only case study used in years 1 and 2 of the new IP module (2000 and 2001).

In year 3 (i.e., 2002), a second case study was added relating to potential elder abuse. In year 4 (2003), a spousal abuse case study was introduced. In the latter 2 case studies, unlike the first one, the role of the dental professions was not the focus, even though such a role has been identified in these situations.[23]

Methods

Module

"From Family Violence to Health" is a 2-hour workshop integrated into existing required courses. Students prepare

Table 1 Questions discussed in small interprofessional groups[a]

What policies, regulations and educational programs would you propose to move society from family violence to health?
What interprofessional action would support the implementation of these suggestions?
How can professionals and other members of society facilitate a move from family violence to health?

[a]*After reading of case study materials for the "From Family Violence to Health" module.*

Table 2 Qualitative evaluation: questions posed to students before and after participation in the module[a]

What is the role of your profession in relation to family abuse?
How might health professionals from various disciplines work together to increase health in our communities by decreasing family violence and problems related to family violence?
What did you learn from this module about how professionals can and should be working together to reduce family violence and its impact? (year 2 only, after module)

[a]*In year 1 and year 2 of the program (i.e., 2000 and 2001).*

for the module by reviewing the background materials, learning objectives and case studies posted on the IP Web site.[14] The module begins with a plenary session that includes definitions of health and family violence. This is followed by small-group sessions, where students work through a case involving the possibility of abuse.[14] Each student group has representation from a mix of health care professions.

Students reconvene into a large group for the follow-up plenary session. Reporters from the small groups share the results of their discussions, focusing on 3 specific questions (**Table 1**). A closing plenary panel, with experts from law enforcement, social work and legal aid, was added in year 2 to address the issues that students raise.

Two hours of classroom time per module is deemed sufficient, because each module is designed to complement, not replace, existing uniprofessional education. The intent is to improve the effectiveness of these "silo" educational efforts through transdisciplinary awareness and problem-solving.

Students

In year 1 (2000), the module was pilot tested with 32 dental hygiene students and 11 graduate students in health services administration. In year 2 (2001), participants consisted of 19 dental hygiene, 20 dentistry, 12 health services administration, 7 human communication disorders, 32 nursing, 11 occupational therapy and 18 physiotherapy students. In year 3 (2002), there were a total of 468 students from 14 health professions. By the completion of year 4 (2003), a total of 1,182 students from 15 professions had completed the "From Family Violence to Health" module. The module is now mandatory for all students entering a health profession through a diploma or degree program in the Faculties of Dentistry, Medicine and Health Professions.

Setting

The setting for the presentation of each module is an auditorium, with the students seated in assigned small groups. Faculty and field facilitators are accessible to the groups. The brief opening plenary and the closing plenary with panel of experts take place without the need for students to move between rooms, and hence loss of class time is avoided.

Data Collection

Years 1 and 2. The goals of the qualitative evaluation in years 1 and 2 (2000 and 2001) were to determine how the module influenced students' thoughts about the roles of health care professionals in handling issues of family violence and to assist in further developing the module for future years. Qualitative methods are particularly appropriate in a situation such as this, where relatively little is known about the impact of a new intervention and a better understanding of contextual factors as well as outcomes is desired.[24] Interviews with open-ended questions, multiple-rater document review and verification by informants are appropriate research methods.[24]

The students completed evaluation forms before and after participating in the module, indicating the educational program in which they were enrolled and providing responses to 3 questions (**Table 2**). Each student's forms were assigned a unique number so that answers obtained before and after participation could be compared. The anonymous responses were transcribed (by typing) before review.

Verification (termed triangulation in qualitative evaluation terminology) was performed by reviewing feedback on the IP module content and process obtained orally and in writing from students immediately upon completion of the module, as well as in subsequent uniprofessional classes.

Year 3. The increase in the number of students participating and the shift from developmental to operational mode by year 3 prompted the use of survey questions with quantitative scoring to evaluate the module. Using a scale from 1 (strongly disagree) to 5 (strongly agree), students ranked their views on 6 statements related to the IP and module learning objectives (**Table 3**).

Data Analysis

Years 1 and 2. Two of the authors (G.M.J., H.A.R.), both of whom had students participating in the IP module, independently reviewed and compared the before and after

Table 3 **Results of postmodule assessment by students in year 3 (2002)**

Survey statement	Mean score[a]	SD
I found the content of the module relevant to my work as a helping professional	4.2	0.7
The material that was covered increased my appreciation of family violence issues as they affect people	4.0	0.8
The material caused me to reflect more critically on my own and my profession's effectiveness in responding to needs and priorities	3.9	0.8
I increased my awareness of how prevailing policies on family violence can affect my own practice and the lives of people with whom I work	4.0	0.8
I have a better understanding of the complementary roles of various health professionals as they deal with the issue of family violence	3.7	0.9
My small group was effective in stimulating interprofessional exchange	3.8	0.8

SD = standard deviation.
[a]1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

responses of each student and identified themes emerging from this comparison. They met with the IP coordinator and faculty responsible for the participation of other health care professional students to review the themes identified. The third author (L.M.C.), who had completed the module as a student and subsequently facilitated other IP modules, independently reviewed all written evaluations and summarized her findings. This manuscript was prepared through dialogue among the authors on the basis of these source documents and the literature reviewed.

Year 3. Mean scores and standard deviations were computed for student rankings of each of the 6 evaluative statements.

Results

Premodule Knowledge (Years 1 and 2)

The premodule evaluation carried out in years 1 and 2 only revealed that, before participating in the module, students focused their attention on the individual patient, and would refer him or her to appropriate resources. They emphasized their individual professional responsibilities and were relatively vague in describing their roles and appropriate actions. For example, one dental hygiene student reported that "It is the role of dental hygienists and dentists to be aware of any of the signs of family abuse in their patients and to try to help the patient as best they can." Most students were aware of a general responsibility to report incidents of family violence to the appropriate authorities, but they had little knowledge of exactly what such reporting might entail or precisely how to proceed. Most made no mention of a greater role in prevention, assessment, working with others in detection or intervention.

Postmodule Attitudes (Years 1 and 2)

A noticeable change was evident in responses obtained after participation in the module. Among the dental and dental hygiene students who completed the evaluation in years 1 and 2, only 17% (12/71) reported that they did not learn anything from the module regarding their role. Even fewer (5 or 7%) indicated no change in their understanding of the ways in which health care professionals could work together to address family violence problems. The reported new learning from the majority of students was grouped into 4 themes.

Increased Awareness, Knowledge and Specificity of Roles. There was increased recognition of a professional's responsibility to report any signs of family violence, and answers to the questions became more specific. For example, before participating in the module, students mentioned contacting "authorities," whereas after the module they provided details about the appropriate police and social service agencies to be contacted. When asked what they learned specifically from the module, students reported an expanded knowledge base regarding family violence and showed greater concern for their legal obligation to report instances of violence.

Broader Perspective. After discussions with students from other health care professions, students' focus expanded to encompass a more comprehensive and supportive role. Students indicated the need to include not only the abused individual but also family members and other health care professionals who might be directly or indirectly involved in the situation. They focused not only on physical abuse but also on psychological and emotional abuse. The interaction with other health care professional students during the module resulted in participants moving beyond consideration of treatment of violence and abuse to consideration of a prevention and education role.

IP Problem Solving. Although a small number of students mentioned interaction with other health care professionals before participating in the module, most did not identify this as part of their profession's role. After the module, students were far more likely to describe how they would work with other health care professionals. This included not only "communication with other health professionals" but

also the need to "bring professionals together to address root causes of family violence/abuse."

Responses obtained after the module indicated that students had a heightened awareness of the importance of communication and cooperation among health care professionals. For example, one student mentioned the need for an "interprofessional approach to rehabilitating/treating both the victim and the abuser." Some students indicated the desire to learn more about each profession and how each might contribute to the prevention, detection and treatment of family violence.

The IP module was successful in encouraging students to consider ways in which they might work collaboratively in the future. Before the IP module, many students viewed family violence as a responsibility specific to their own professions. However, after the module, there was a feeling of shared responsibility with other health care professionals and the identification of a need to "work together in the community to change attitudes about family violence."

Interprofessional Support. Students reported an increased understanding of the role of other health care professions in the care continuum. They also became aware of potential ways to support and complement each other when dealing with complex issues such as family violence.

Evolution of the Impact of the IP Module over Time

In year 1, the IP module expanded the thinking of both dental hygiene and health services administration students regarding family violence and the role of their professions. In year 2, the focus moved from the interaction between these 2 groups of students to learning across 7 professions.

In year 3, a total of 468 students from 14 health care professions participated. The 293 (62.6%) who completed the quantitative survey after the module reported that they had achieved the learning objectives. Mean student ratings indicated that the "From Family Violence to Health" IP module was relevant (4.2), improved their understanding of family violence (4.0) and, to a slightly lesser extent, promoted IP learning (3.8) (**Table 3**).

Discussion

The Dalhousie IP learning modules are consistent with Klein's[25] idea of an epistemology of convergence to answer complex questions, address broad issues, explore disciplinary and professional relationships, solve problems beyond the scope of any one discipline, and achieve unity of knowledge, whether limited or on a grand scale. While the process can be viewed as either "bridge building" or "restructuring,"[25] the latter has a greater emphasis in the upper-year IP modules at Dalhousie University. Implicit assumptions are that these modules will enable critical thinking and reformulation of uniprofessional knowledge and assumptions in a transdisciplinary context. The findings of qualitative evaluation in years 1 and 2 as well as the quantitative scores in year 3 demonstrate that the Dalhousie IP "From Family Violence to Health" module had a positive influence on students.

Unlike the tendency in the United States to link interdisciplinary learning to undergraduate education,[25] the Dalhousie IP model is influenced by European thinking, which is not as limiting in terms of when such learning should occur. Both graduate students (in health services administration and human communication disorders) and undergraduate students (in medicine and dentistry, among others) participate in the Dalhousie IP modules; the focus is on students in their first 3 years of professional education regardless of the academic level of the program. Field practitioners work in tandem with academics in the development and delivery of the IP modules. The module evaluation has demonstrated that the Dalhousie approach is relevant and that it has increased awareness of family violence and of the value of IP collaboration.

An overall intent of the upper-level IP modules is to "scan" the thinking of various health care professionals, identify the ideas that are common to various professions, and present these ideas in language that is clear to all professions and that do not contain terms unique to one or a few professions. This can achieve at least 5 purposes: self-knowledge, sense of history and context, cross-cultural awareness, synthesis of principles and values, and identification of the range of empirical bases that guide theory and practice.[25] The goal of Dalhousie's IP learning is not to create a new field of study that would replace existing education. Rather, it is to allow students to engage in insightful, critical discourse that adds to their depth of understanding regarding the limitations and opportunities for advancement in their own profession by seeing that profession operating in a larger context. IP modules foster more coherent system thinking as well as higher-order intellectual skills of synthesis and integration. After participating in the IP module on family violence, students had new insights and greater cross-professional understanding.

Conclusions and Recommendations

As health care delivery becomes increasingly focused on the involvement of care teams and system thinking, the necessity of providing IP training in the university setting is expected to increase. The approach and results reported here illustrate the advantages of IP learning for health care professional students. IP learning promotes a deeper understanding of complex health care issues and models a collaborative approach to resolving challenging problems in the delivery of health care. However, since IP learning is in its infancy, models of provision must evolve in response to evaluation findings and reflection. With regard to IP learning about family violence, an educational approach should

be selected that is effective in increasing the identification of family violence, handling it effectively and decreasing negative impacts in communities.

IP learning in basic health care professional education is at an embryonic stage. To move forward, IP module-based learning must become tightly integrated and perceived as a cross-cutting value in traditional education. Continuing evaluation is needed to elucidate the knowledge, attitudes, skills and practice changes resulting from IP learning in both the short term and over the longer term. It is time to test the Dalhousie IP modules in another setting.

Concept Feedback and Discussion

Insights about and appraisal of the IP module learning program from dental and other practitioners would be welcomed by the authors. Some of the questions that might be considered include the following: How can progress be made to more adequately overcome family violence? Is the IP educational innovation at Dalhousie University a useful model for other universities? Might there be value in promoting this educational approach in a continuing education format? Might a different model of IP education be appropriate? Should dental professionals be more involved in the development of IP and family violence education?

This paper has presented an innovative approach to basic education about family violence. It is hoped that this article will prompt critical reflection and dialogue on how best to advance both IP and family violence education. ◆

Acknowledgements: *We acknowledge support and input during module development provided by the members of TriIPAAC, Dalhousie University's Tri Faculty Interprofessional Academic Advisory Committee. In particular, Sheila Banks and Lois MacGregor, IP coordinators, as well as Joanne Clovis, coordinator of the Dental Hygiene program, contributed thoughtful insights. Thanks also to Rose MacIntosh and Theresa Gilbert for typing the transcripts of student feedback.*

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The views expressed are those of the authors and do not necessarily reflect the opinion or official policies of the Canadian Dental Association.

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