Wanted: Interdisciplinary, Multidisciplinary, and Knowledge Translation and Exchange Training for Students of Public Health

Lipi Mishra, BHSc,¹ Ananya T. Banerjee, MSc,² Mary E. MacLennan, BA&Sc,³ Paul F. Gorczynski, MA,⁴ Kate A. Zinszer, MSc¹

ABSTRACT

Students vocalized their concern with public health training programs in Canada at the 2010 CPHA Centennial Conference. Given these concerns, we reviewed the objectives and curricula of public health graduate (master's) programs in Canada. Our objective was to understand to what extent public and population health graduate programs in Canada support interdisciplinary, multidisciplinary and knowledge translation and exchange (KTE) training. This was achieved through a review of all public and population health master's programs in Canada identified from the public health graduate programs listed on the Public Health Agency of Canada website (n=33) plus an additional four programs that were not originally captured on the list. Of the 37 programs reviewed, 28 (76%) stated that interdisciplinary, multidisciplinary or cross-disciplinary training opportunities are of value to their program, with 12 programs (32%) providing multidisciplinary or interdisciplinary training opportunities in their curriculum. Only 14 (38%) of the 37 programs provided value statements of KTE activities in their program goals or course objectives, with 10 (27%) programs offering KTE training in their curriculum. This review provides a glimpse into how public health programs in Canada value and support interdisciplinary and multidisciplinary collaboration as well as KTE activities.

Key words: Education; public health professional; students; public health; interdisciplinary communication; curriculum

La traduction du résumé se trouve à la fin de l'article.

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At the CPHA centennial conference in June 2010, a student-based event was organized to discuss future priorities and challenges in Canadian public health training from student perspectives.¹ The event drew students from diverse disciplines and involved a panel presentation followed by a breakout session. This commentary addresses the principal concern raised by students: public health training programs in Canada.

Students noted the tendency of public health programs to overstate their objectives with respect to both interdisciplinary and multidisciplinary collaboration and knowledge translation and exchange (KTE) opportunities. These are central aspects of public health² that students believed are not appropriately emphasized in public health programs. Given these expressed concerns, we reviewed the objectives and curricula of public health graduate (master's) programs in Canada. Our objective was to understand to what extent public and population health graduate programs in Canada support interdisciplinary, multidisciplinary and/or KTE approaches and training.

Review methods

The review was based on all public and population health master's programs in Canada (n=37). Programs were first identified on the Public Health Agency of Canada (PHAC) website (n=33), which lists all public health-related master's programs in Canada.³ Four additional programs that were not captured on the PHAC list but contain a strong focus on health promotion and disease protection from a population perspective, were also included in this review.

After compiling the list of public health programs, program websites were used as the information basis for this review. Program

objectives, course descriptions, course websites, and course syllabi were examined, when available, to determine if interdisciplinary, multidisciplinary and/or KTE approaches and training were offered by each program. Our evaluation of public health programs consisted of two items of interest. First, a program was determined to *value* interdisciplinary, multidisciplinary and KTE approaches based on whether or not these approaches were specifically mentioned with the program objectives or within a course objective. Second, a program was then determined to *offer* training opportunities in interdisciplinary, multidisciplinary collaboration and KTE activities based on whether or not it was explicitly stated within one of the course objectives offered as part of the program curriculum.

RESULTS

Of the 37 programs reviewed, 28 (76%) included statements about the value to their program of interdisciplinary (50%), multi-

Author Affiliations

1. Department of Epidemiology, Biostatistics, and Occupational Health, McGill University, Montreal, QC
2. Department of Clinical Epidemiology & Biostatistics, McMaster University, Hamilton, ON
3. McGill University, Montreal, QC
4. Department of Exercise Sciences, University of Toronto, Toronto, ON

Correspondence: Kate Zinszer, Clinical and Health Informatics Research, McGill University, 1140 avenue des Pins Ouest, Montréal, QC H3A 1A3, Tel: 514-934-1934, ext. 3923, Fax: 514-843-1551, E-mail: kate.zinszer@mail.mcgill.ca

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disciplinary (36%) or cross-disciplinary (14%) approaches to public health issues. For example, a value statement from the University of British Columbia reads: "Our graduates will be capable of applying this knowledge [integrated knowledge and skills] to a diverse range of health issues in interdisciplinary environments."⁴ Only 12 of these 28 programs listed multidisciplinary (17%) or interdisciplinary (83%) training opportunities in their course curriculum. One example of interdisciplinary training is a course on interdisciplinary public health practice offered at the University of Saskatchewan as part of its core curriculum.⁵ This course is based on the seven core competency domains in public health as defined by PHAC and is taught by a team of instructors comprised of faculty, public health practitioners, and professionals. The course seeks to "provide students with interactive methods of learning key aspects of interdisciplinary collaboration as it relates to public health through the use of case studies, seminars, and presentations."

Fourteen of the 37 programs (38%) cited KTE opportunities, training activities and/or approaches in their program objectives. Ten programs (27%) offered KTE training in the form of a course curriculum. One course that can potentially serve as a model for KTE training is McMaster University's Knowledge Exchange and Translation course, which seeks to provide a comprehensive introduction to KTE through the use of "conceptual frameworks, research design, and interventions used in knowledge exchange and translation."⁶

DISCUSSION

This review provides evidence to support student concerns of a lack of training on key aspects of public health. Although there are several schools that state they value interdisciplinary and/or multidisciplinary perspectives and KTE activities, only one third of schools actually offer formal training in these critical areas. Of particular interest were the differences between program objectives and formal curriculum; whereas certain programs stated the value of multidisciplinary training broadly in their program objectives, a review of the curriculum often found no evidence for opportunities or exposure to these areas. Also of importance was the different terminology used in course objectives and curricula, such as multidisciplinary, interdisciplinary and cross-disciplinary. Despite the distinct differences between these approaches to collaboration, programs often used these terms interchangeably.

Collaboration between disciplines outside of the health care sector is becoming increasingly important for addressing health inequities and thus, tools to facilitate such partnerships may be an important skill to acquire during one's training. Interdisciplinary collaboration in public health facilitates the integration of different perspectives (e.g., urban planning and public health) for managing public health issues.⁷ Similarly, multidisciplinary collaboration allows different fields of expertise to work collectively on health issues while retaining their professional and methodological boundaries.⁸ Consequently, it would seem reasonable for public health training programs to offer interdisciplinary and multidisciplinary training as part of their core curricula. Based on our findings and the concerns voiced by students, we suggest that this vision should be applied by all schools of public health,⁷ to foster a new generation of individuals who can effectively work and communicate within different disciplines.

Students believe they should be encouraged not only to translate and disseminate their findings to various stakeholders, but also supported to connect with other students, mentors and community partners to improve ways that knowledge can be exchanged.⁹ Public health training at the graduate level is a potentially crucial time for students to acquire KTE skills that will become a valuable tool throughout their careers.

The limitations of this review are based on the use of program and course websites as well as course syllabi for information. The websites may not reflect the most recent objectives and curricula. However, we believe that this is unlikely because students continually rely on websites to choose their programs and courses, suggesting that schools likely keep their information up to date. Practica are also potentially important sources of learning multidisciplinary, interdisciplinary and KTE skills. However, we did not formally examine the availability and type of practica in public health programs. A great concern with the review is the reality that what takes place in a program, course, practicum, or more informally may not be fully reflected on a program's website. We did not conduct an in-depth review of the training and opportunities of each program, which means there is a potential for misclassification of programs and courses (although we do not know if this error has led us to over- or underestimate our findings).

CONCLUSION

Students are concerned and believe that schools of public health can better support and develop multidisciplinary, interdisciplinary and KTE training. These competencies are imperative for students of public health; they provide the foundation to developing more effective approaches of addressing current and future public health challenges and priorities. Despite the limitations of this review, we believe that the results support the concerns raised by students and recommend that administrators of schools of public health give greater attention to multidisciplinary, interdisciplinary and KTE training activities.

REFERENCES

1. Canadian Public Health Association. Archive of the CPHA Centennial Conference, 2010. Available at: <http://www.cpha.ca/en/conferences/archives/conf2010.aspx> (Accessed September 1, 2010).
2. el Ansari W, Russell J, Spence W, Ryder E, Chambers C. New skills for a new age: Leading the introduction of public health concepts in healthcare curricula. *Public Health* 2003;117(2):77-87.
3. Public Health Agency of Canada. Graduate Training, 2010. Available at: http://www.phac-aspc.gc.ca/php-psp/master_of_php-eng.php (Accessed December 28, 2010).
4. University of British Columbia Master of Public Health Degree Program. Available at: <http://www.mph.spph.ubc.ca/index.php> (Accessed May 24, 2011).
5. University of Saskatchewan School of Public Health. Required Courses. Available at: http://www.usask.ca/sph/graduate_programs/mph/required_courses.html (Accessed January 28, 2011).
6. McMaster University Health Research Methodology Program. Course List. Available at: http://www.fhs.mcmaster.ca/hrm/course_list.html (Accessed February 12, 2011).
7. Neuhauser L, Richardson D, Mackenzie S, Minkler M. Advancing transdisciplinary and translational research practice: Issues and models of doctoral education in public health. *J Res Pract* 2007;3(2):1-23.
8. Hoffman E, Massion C. Women's health as a medical specialty and a clinical science. In: Sherr L, St Lawrence JS (Eds.), *Women, Health, and The Mind*. Sussex, England: John Wiley & Sons Ltd, 2000;3-16.
9. Graham ID, Logan J, Harrison MB, Straus SE, Tetroe J, Caswell W, et al. Lost in knowledge translation: Time for a map? *J Continuing Educ Health Professions* 2006;26(1):13-24.

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RÉSUMÉ

Lors de la Conférence du centenaire de l'ACSP en 2010, des étudiants ont exprimé leurs inquiétudes concernant les formations dans le domaine de la santé publique au Canada. Compte tenu de ces préoccupations, nous avons passé en revue les objectifs et le curriculum des différents programmes d'études de 2^e cycle (maîtrise) en santé publique existant au Canada. Notre objectif était de comprendre dans quelle mesure ces programmes permettent aux étudiants de bénéficier d'une formation aussi bien interdisciplinaire que multidisciplinaire, et qui facilite l'application et l'échange des connaissances (AEC). Nous avons parcouru la liste des programmes d'études de 2^e cycle en santé publique disponibles sur le site de l'Agence de la santé publique du Canada (n=33), ainsi que quatre programmes additionnels qui étaient absents de la liste. Sur les 37 programmes évalués, 28 (76 %) indiquent que les aspects interdisciplinaires et multidisciplinaires sont essentiels à leurs programmes, tandis que 12 d'entre eux proposent une formation impliquant des aspects multidisciplinaires et interdisciplinaires dans leur curriculum. Seulement 14 (38 %) des 37 programmes appuient clairement leurs objectifs de programmes ou les cours offerts sur des activités d'AEC, dont 10 (27 %) qui proposent une formation à l'AEC dans leur curriculum. Notre étude donne un aperçu de la façon dont les différents programmes en santé publique disponibles au Canada facilitent et valorisent la collaboration interdisciplinaire et multidisciplinaire, ainsi que les activités d'AEC.

Mots clés : éducation; formation professionnelle en santé publique; étudiants; santé publique; communication interdisciplinaire; curriculum

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