Medical students' views on training in intellectual disabilities

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ABSTRACT

OBJECTIVE To examine undergraduate medical training in the field of intellectual disabilities (ID) from the perspective of clinical clerks.

DESIGN Cross-sectional self-administered survey.

SETTING Clerkship rotations at Queen's University in Kingston, Ont, and the University of Toronto in Ontario in 2006.

PARTICIPANTS A total of 196 upper-year undergraduate medical students (clerks).

MAIN OUTCOME MEASURES Contact with people with ID, training in the field of ID, perceptions of current training in ID, and views on ways to improve the curriculum in the area of ID.

RESULTS Most students (85.6%) had received some didactic and clinical training in managing patients with ID, but most of these (93.3%) believed that curriculum enhancements, especially more contact with patients with ID and more time in the curriculum for training in care of people with ID, were necessary.

CONCLUSION This study found that the curriculum enhancements long recommended by experts in the field of ID were also desired by clinical clerks. This finding adds considerable weight to the recommendation that improvements in training in ID should be incorporated into undergraduate medical education programs.

EDITOR'S KEY POINTS

- Experts in the field of caring for people with intellectual disabilities (ID) have long recommended that students in undergraduate medical education programs should receive better training in this area. This survey asked clinical clerks from 2 Canadian universities for their opinions on the amount and adequacy of training they had received in ID.
- About 85% of clerks had received didactic and clinical training in care of people with ID; most of these thought that the training should have included more contact with patients with ID and that training in care of people with ID should have been allotted more time in the curriculum.
- Interestingly, more than two-thirds of those surveyed thought primary care for people with ID should be provided by ID specialists, rather than primary care physicians.
- These findings add weight to the recommendation that training in ID needs to be enhanced in undergraduate medical education programs.

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Opinion des étudiants en médecine sur la formation en déficience intellectuelle

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RÉSUMÉ

OBJECTIF Vérifier l'opinion des stagiaires en clinique sur la formation médicale de premier cycle dans le domaine de la déficience intellectuelle (DI).

TYPE D'ÉTUDE Enquête transversale auto-administrée.

CONTEXTE Stages rotatoires de 2006 à l'Université Queen's, à Kingston, (Ont.), et à l'université de Toronto (Ont.).

PARTICIPANTS Un total de 196 étudiants en médecine en fin de premier cycle (stagiaires).

PRINCIPAUX PARAMÈTRES ÉTUDIÉS Contact avec des personnes souffrant de DI, formation dans le domaine de la DI, opinion sur la formation actuelle en DI et suggestion de moyens pour améliorer le programme dans ce domaine.

RÉSULTATS La plupart des étudiants (85,6%) avaient reçu une certaine formation théorique et clinique sur le traitement des patients avec une DI, mais la plupart d'entre eux (93,3%) jugeaient nécessaire de bonifier le programme, notamment en augmentant les contacts avec les patients souffrant de DI et le temps alloué à la formation sur les soins à ces patients.

CONCLUSION Cette étude a montré que l'amélioration de la formation en DI depuis longtemps recommandée par les experts est aussi souhaitée par les stagiaires en clinique. Cette observation renforce considérablement la recommandation à l'effet qu'on doit améliorer la formation en DI dans les programmes de formation médicale de premier cycle.

POINTS DE REPÈRE DU RÉDACTEUR

- Les experts du domaine des soins aux personnes atteints de déficience intellectuelle (DI) recommandent depuis longtemps une meilleure formation dans ce domaine pour les étudiants en médecine du premier cycle. Cette étude voulait connaître l'opinion des stagiaires de 2 universités canadiennes sur la quantité et la pertinence de la formation en DI qu'ils avaient reçue.
- Environ 85% des stagiaires avaient eu une formation théorique et clinique sur les soins aux personnes souffrant de DI: la plupart d'entre eux croyaient que cette formation aurait dû inclure davantage de contacts avec les patients souffrant de DI, et que le cours devrait consacrer plus de temps aux soins que requièrent ces patients.
- Chose intéressante, plus des deux tiers des répondants pensaient que l'enseignement sur les soins primaires aux personnes avec DI devrait être donné par des spécialistes de la DI plutôt que par des médecins de première ligne.
- Ces résultats viennent appuyer les recommandations vouant qu'on améliore la formation en DI dans les programmes médicaux du premier cycle.

*Le texte intégral est accessible en anglais à **www.cfp.ca.**
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There is an urgent need for well trained physicians to care for people with intellectual disabilities (ID). Intellectual disabilities are also referred to as developmental disabilities (in Canada), learning disabilities (in the United Kingdom), and mental retardation (in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th edition). People with ID have substantial limitations in both intellectual functioning and adaptive skills. Such limitations become apparent before the age of 18 years.[1] While those with ID make up only 1% to 3% of the population in Canada,[2-4] they have a greater number and variety of health care needs, as well as substantially higher mortality rates, than do people in the general population.[5-7] A key barrier to adequate health care for people with ID is physicians' lack of experience in caring for this population.[8,9] The need for advanced knowledge and skills to serve people with ID adequately has been widely recognized.[10-14] A report prepared by the International Association for the Scientific Study of Intellectual Disabilities for the World Health Organization noted the lack of general training in ID among primary health care providers. The report recommended that nations ensure that medical and health care personnel receive sufficient training in care of people with ID to provide appropriate preventive and treatment-oriented health and social services to them.[15]

Authors of some Canadian studies have argued that more attention to training medical students in this area is a key component of improving the health care of those with ID.[7,16-20] The need for adequate training is more pressing because of changes in Canadian social policy. Over the past 30 years, there has been a steady trend in most Canadian provinces toward community living rather than institutionalization for people with ID. As a result, people with ID and, indeed, the governments and agencies that support them expect health care to be provided by the generic health care services in the community, including by public hospitals. While few practitioners in these settings have expertise in working with people with ID, there is an increasing recognition and acceptance of the fact that all physicians will be required to assess and treat those with ID, regardless of specialty. The need for better patient care for people with ID was the main reason that a group of concerned physicians and allied health care providers recently authored and promoted primary care guidelines for Canadian physicians treating adults with ID.[21] This group also recommended a minimum of 22 curriculum hours of training be devoted to care of people with ID in all Canadian medical schools (personal communication from Dr William Sullivan, Assistant Professor, Department of Family and Community Medicine, University of Toronto, April 24, 2007).

While few Canadian medical schools currently include specific training in ID as part of their undergraduate medical education programs,[17] Queen's University (Queen's) in Kingston, Ont, and more recently the University of Toronto (U of T) in Ontario have developed a full day of teaching on ID within the 6-week clerkship psychiatry rotation in addition to other lectures and problem-based learning modules specific to care of people with ID offered throughout the 4 years of training.

This study involved collaboration between these 2 universities in order to understand better the perspectives of upper-year undergraduate medical students on preparation for working with people with ID. Results of this study will guide efforts to improve the medical training of students in this field and, by extension, might improve the future health care of people with ID.

METHODS

This cross-sectional survey was administered to upper-year undergraduate medical students who were completing the clinical portion of their education (ie, students often referred to as clinical clerks or clerks) at Queen's and U of T during 2006. Ethical approval for the study was received from the research ethics boards of both universities. In all, 346 students enrolled in psychiatry clerkship rotations between November 7, 2005, and December 31, 2006, were eligible to complete the survey on a voluntary basis at the beginning and end of this rotation. All findings presented in this paper are taken from surveys completed at the end of the rotation.

Research instrument

A questionnaire that had been used previously[17] was adapted for this study. The questionnaire was pilot-tested on 10 clerks in August 2005, and minor revisions were made to some items based on their responses. The self-administered questionnaire took approximately 15 minutes to complete. Two main sections contained 63 closed and open-ended questions. The first section asked about the quantity and quality of clinical and didactic training in care of people with ID received to date as well as each clerk's perspectives on how to improve training,

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prior professional and personal contact with people with ID, demographic characteristics, and specialty preferences for medical residency. The second section comprised knowledge-based questions and questions on attitudes. Findings from the first section only are presented in this paper.

Programs

Queen's has one of the country's smaller medical schools. Its main campus is located in Kingston. It accepts about 100 students each academic year and mainly serves the health care needs of people residing in southeastern Ontario (population of about 550 000). In contrast, U of T belongs to one of North America's largest health sciences complexes, primarily serves people residing in the greater Toronto area (population of about 5 500 000), and accepts around 210 students each academic year. The medical schools have similar objectives and missions and seek to prepare future health care leaders and improve the health of individual people and communities through innovation in research and education. Both faculties are affiliated with a number of teaching hospitals and community-based health services that offer students a spectrum of educational experiences and extensive hands-on clinical instruction. The education provided by both medical schools would enable graduates to become leading health professionals in Canada's rural, northern, and urban communities, as well as to become researchers and educators for the nation's future.

All clerks at Queen's were likely to have attended 1 specific lecture in ID during their first or second year, and some would also have been assigned an ID-related problem-based learning case before their clerkship. During their rotation in psychiatry, clerks who were placed locally typically attended a mandatory, clinically focused, day-long trip to a residential institution for adults with ID, and about a quarter were also assigned to take part in a community-based day on caring for people with ID. Chance clinical encounters with patients with ID might also have occurred during day-to-day work while these clerks were on psychiatry placements. In many instances at Queen's, clerks who were placed considerable distances away did not receive the formal day-long training nor have an opportunity to complete post-rotation surveys. All except 36 clerks from U of T attended a full community-based day in care of people with ID. These 36 clerks might have received some training in ID during rotations (eg, approximately 20% of participants would have received a 2-hour seminar on dual diagnosis given by a psychiatrist at the psychiatric hospital) or earlier in their training; they were given the opportunity to complete post-rotation surveys.

Data analysis

All statistics were calculated using the Statistical Package for the Social Sciences, version 14, for Windows.[22] Descriptive statistics were calculated to characterize the sample. Clerks' responses to the question on their specialty preferences for medical residency were later grouped according to the National Occupational Classification,[23] which is commonly used by Human Resources and Social Development Canada.

RESULTS

Response rate and respondents' characteristics

Of the 346 clerks enrolled during the study period (248 at U of T and 98 at Queen's), 196 completed post-rotation surveys for an overall response rate of 56.6% (52.8% for U of T and 66.3% for Queen's). Many nonrespondents missed the opportunity to complete post-rotation surveys because they were ill or absent for various reasons or were on placements elsewhere. Nonrespondents did not differ from respondents as to proportion of men and women, but no additional information was available on them. Of the 196 medical students who completed the survey, 131 (66.8%) were enrolled at U of T. **Table 1**[23] shows respondents' demographic characteristics and the amount and type of contact they had had with people with ID.

Perceptions of training

A high proportion of clerks at both universities (85.6%) indicated that they had received specific didactic education on ID during medical school. Two-thirds or more of the clerks noted that 6 of 12 topics had been covered (**Table 2**). The quality of instruction on the 12 topics was rated as good or better by 68.4% of clerks. The quantity of undergraduate didactic instruction was rated inadequate by 50.8% of clerks and adequate or extensive by the remainder.

About 70.4% of respondents reported having observed patients with ID in clinics or having treated them professionally during medical training. Around 21% of these clerks saw 5 or more patients; the remainder saw fewer. Almost 55% reported they had seen patients with both ID and another mental disorder; 16.0% of these clerks had seen 5 or more such patients.

Among clerks who had seen patients with ID, 76.2% rated the clinical supervision they received as good, very good, or excellent. Clerks indicated that clinical contact with patients with ID tended to occur while they were visiting patients in community agency programs, institutions, or hospitals.

By far most clerks (93.3%) agreed that there was a need to improve coverage of care for people with ID during medical training; the remainder reported that there was no need to change the curriculum. Most often endorsed was the view that their training would have

Table 1. Respondents' demographic characteristics and amount and type of contact with people with intellectual disabilities (ID): *N = 196, unless stated.*

CHARACTERISTICS	N (%)
Sex	
• Male	100 (51.0)
• Female	96 (49.0)
Age (n = 194)	
• 20-29 y	167 (86.1)
• 30 y and older	27 (13.9)
Preferences categories for residency training* (n=195)	
• General practitioner and family physician	37 (19.0)
• Specialist in surgical medicine†	29 (14.9)
• Specialist in clinical medicine‡	122 (62.6)
• Specialist in laboratory medicine§	4 (2.1)
• Undecided	3 (1.5)
Do you have or have you had a close family member with ID?	
• Yes	16 (8.2)
• No	180 (91.8)
Have you ever known anyone personally with ID other than a family member? (n = 195)	
• Yes	82 (42.1)
• No	113 (57.9)
Have you ever worked alongside someone with ID who was a coworker?	
• Yes	12 (6.1)
• No	184 (93.9)
Have you ever worked or volunteered to support someone with ID?	
• Yes	65 (33.2)
• No	131 (66.8)
Have you ever seen people with ID where you live, work, or go to school?	
• Yes	162 (82.7)
• No	34 (17.3)

*Categories follow Canada's National Occupational Classification System.[23]
†This category includes all surgeons, ophthalmologists, and urologists.
‡Examples from this category include anesthetists, cardiologists, dermatologists, emergency physicians, geriatricians, neurologists, oncologists, pediatricians, psychiatrists, and rheumatologists.
§This category includes all pathologists, medical biochemists, and microbiologists.

been better with more clinical contact with people with ID and more time in the curriculum for training in their care (**Table 3**).

Most clerks believed that their future practice would likely include patients with ID (88.8%), that all physicians should be trained in care of those with ID (96.4%), and that training in ID is good preparation for other areas of medicine (90.7%). Clerks were asked to provide written comments on how or why training in ID was or was not beneficial to other areas of medicine. Of the approximately one-third who provided details, most indicated that they believed every physician would see patients with ID, regardless of specialty, and, therefore, should be prepared during undergraduate training to care for these patients. Several other positive comments provided more specific details on a range of perceived benefits. One participant wrote that the training prepares "us to be patient, increase communication abilities and techniques, to be empathetic and see everyone as a person." Another commented that skills in caring for those with ID could well be applied to the "care of children, elderly or demented, and those with psychiatric disorders, especially in terms of communication skills." A few clerks indicated that they believed the number of patients with ID was too small to warrant attention during training, and a few said they intended to pursue a certain specialty (eg, pathology) where such training would not be beneficial.

Despite the overwhelming endorsement for training in ID for all physicians, 69.4% of clerks believed that specialists in ID should be providing primary care to people with ID.

DISCUSSION

Our study's key finding is that there was widespread support from the undergraduates surveyed for more training in ID. This might relate to the belief held by many participants that education in ID is good preparation for other areas of medicine. Having the ability to work with patients with ID requires many skills that are considered useful for caring for a spectrum of patients. For instance, an Ontario study of 559 adults with ID living in the community found that 27% were identified as having difficulties with communication.[24] Proper medical assessment of such patients usually requires clinicians to be proficient in making these patients feel comfortable in a clinical setting; to use advanced receptive and expressive communication skills, such as communicating in very simple and concrete terms; and to take a history often with considerable participation of informants, such as care providers or family members. Possessing these skills upon graduation would put physicians at an advantage when they are faced with common work scenarios with a range of patients, including those who do not speak the same language as the physician or those who have learning disabilities or communication difficulties due to relatively common medical problems, including hearing impairment, brain injury, and stroke. The advantages associated with these skills were in fact recognized by general psychiatry residents in a recent American study assessing their perceptions of a rotation serving inpatients with ID; 93% of these respondents said their training in ID had assisted them

Table 2. Reported coverage of various topics on intellectual disabilities (ID) and adequacy of coverage rated by those who received it

TOPIC	% WHO RECEIVED COVERAGE N=196	% OF THOSE WHO RECEIVED COVERAGE WHO THOUGHT IT ADEQUATE OR EXTENSIVE*
1. Diagnosis of ID	89.3	76.7
2. Diagnosis of mental illness or behaviour disorders in people with ID	86.2	61.6
3. Psychiatric and behavioural phenotypes associated with specific ID	76.3	69.5
4. Communication disorders in people with ID	75.1	74.8
5. Care of adults with ID	71.0	65.5
6. Medication as an intervention (for people with dual diagnoses)	67.1	51.8
7. Special strategies for communicating with people with communication problems due to stroke, head injury, English as a second language, hearing impairment, or ID	64.5	76.0
8. Your own response and attitudes toward disability generally	62.7	78.1
9. Care of young children with ID	49.1	61.0
10. Care of adolescents with ID	42.0	51.4
11. Care of older adults and elderly people with ID	40.8	48.5
12. Psychotherapy as an intervention (for people with dual diagnoses)	37.9	46.9

*For every topic, fewer than 5% of participants who received training rated the topic as covered extensively.

Table 3. Views on ways training in care of people with intellectual disabilities (ID) could be improved: *N = 194.*

WAYS TRAINING COULD BE IMPROVED	N (%)
Adding clinical contact with patients	136 (70.1)
Allotting more curriculum time to care of people with ID	111 (57.2)
Having more parent or self-advocate guest lecturers	79 (40.7)
Having more specialist guest lecturers	64 (33.0)
Adding visits to community group homes	61 (31.4)
Adding orientation to available services and agencies	56 (28.9)
Adding visits to people with ID at their workplaces	45 (23.2)
Covering more current content	35 (18.0)
Having better prepared instructors	24 (12.4)

in learning to communicate better with nonverbal patients.[25] Written comments provided by many of our respondents concerning the generalizable benefits of training in ID seem to support this view.

The high rate of exposure to many of the topics surveyed was expected, given that most clerks attended our formal teaching day on ID. The strong support for increased curriculum time in ID is even more compelling because it is being expressed by students who are already receiving a substantial amount of training in ID relative to students in many other Canadian medical schools. Nevertheless, it should be noted that neither U of T nor Queen's consistently meets the suggested benchmark of 22 hours of curriculum time on care of patients with ID.

Our key finding is similar to findings reported elsewhere in residency programs[17]; participants clearly support enhancements in the area of clinical contact with patients with ID. Rather surprising was the finding that, while by far most clerks reported that such training was good preparation for other areas of medicine and expected to care for patients with ID, more than two-thirds of respondents supported the notion that specialists in ID should be providing primary care to patients with ID. This seems to suggest that students expect to care for patients with ID, but would rather not provide this care directly. It is unusual for primary care to be provided by specialists; while such arrangements sometimes occur with certain populations or medical services, they are often viewed as inefficient and economically wasteful. As educators, we are concerned that we might be leaving students with the erroneous impression that working with patients with ID is so complicated that only ID specialists or interprofessional teams can succeed at it. Future research should investigate underlying beliefs about this finding and determine whether it relates to our concerns, as noted above, or to a general lack of understanding regarding the role of family physicians.

Limitations

Two limitations of the study are possible response bias and limits on the generalizability of results. Respondents did not differ from nonrespondents as to sex. We had no additional information on nonrespondents, so we were unable to rule out response

bias. Almost all nonrespondents attended our training day, but for unknown reasons they declined to complete the survey. We do not know whether our results would be consistent across other Canadian medical schools so we cannot generalize our results beyond U of T and Queen's. Since the students answered the survey while completing a particular rotation (ie, psychiatry), it is possible that the views they reported reflected an evaluation of the adequacy of training at a very specific point in time in their training. Whether the opinions expressed would persist beyond that rotation and into residency is not known. An earlier cross-sectional survey of senior psychiatry residents[17] suggested, however, that both the perception that undergraduate training in ID is inadequate and the desire for enhanced training are reported well into residency training.

Conclusion

Our findings clearly show that curriculum enhancements long recommended by experts in the field of ID are also desired by clerks, adding weight to the argument that enhancements should be incorporated into programs. It is hoped that the known advantages gained by undergraduate medical students who receive adequate training in care of people with ID will eventually translate into better clinical practice in the future and improved health outcomes for all Canadians with ID.

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Contributors

Mr Burge, Ms Ouellette-Kuntz, Dr Isaacs, *and* **Dr Lunsky** *assisted with every phase of the study and contributed greatly to research design, modifications to the survey, planning the steps in data analysis, and drafting and editing the manuscript. The Undergraduate Medical Education in Intellectual Disabilities Group members contributed variously to all or many phases of the study.*

Competing interests

None declared

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