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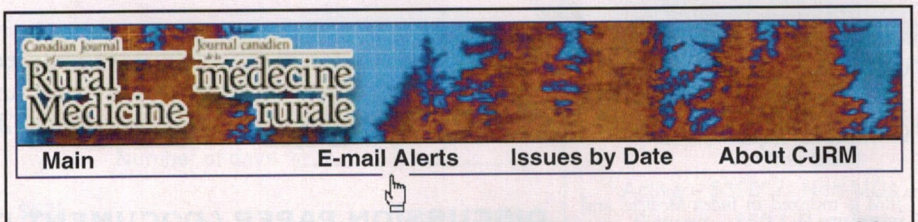

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ADVERTISERS' INDEX / INDEX DES ANNONCEURS

A historic moment — the fellowship of rural and remote medicine

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Last month the first fellowships in rural and remote medicine (FRRMS) were awarded in Halifax, NS, by the Society of Rural Physicians of Canada. It was a historic moment recognizing a combination of academic and leadership achievements.

I remember another historic moment in Roma, Queensland, in 1999 when I witnessed the Australian College of Rural and Remote Medicine (ACRRM) awarding some of its first FACRRM fellows. At the time ACRRM was a grassroots organization with many prominent academics. When it became increasingly obvious that rural general practice required standards that differed from those that apply to urban centres, they became a standards setting body and provider of postgraduate training recognized by the Australian Medical Council.

Australia is a different nation, and we will have to find our own way to meet the needs of those who aspire to practise in Canada. That said, it is also becoming increasingly obvious that it takes a certain knowledge base, skill set and mettle to be successful in rural practice.

Towns with populations of less than 10 000 account for 22.2% of Canada's population, and yet they are served by only 10.1% of physicians. All those rural physicians are special, working as skilled generalists in a system designed for subspecialists. However, our newly minted FRRMS didn't get there by just putting on a suit. A fellowship award is based on both educational and leadership merit on a point system. Those doctors who become eligible for fellowship are among the top 1% of rural doctors in the country.

Since it is the first year, we have a good number of fellows who were awarded. Congratulations to Drs. Rita Affleck, Carolyn Atkinson, Granger Avery, Ken Babey, David Beach, Gordon Brock, Garth Campbell, Abraham de Klerk, Dale Dewar, Herbert Dickieson, Charles Eckfeldt, Carl Eisener, Peter Englert, Yvon Gagnon, Bent Hougesen, David Howe, Peter Hutten-Czapski, Michael Johnston, Stuart Johnston, Mary Johnston, Beverley Karras, Diana Kelland, Len Kelly, Don Klassen, Jill Konkin, Maurice Lamarche, Trina Larsen Soles, Mary Ellen McColl, Kate Miller, Kenneth Murray, Doug Myhre, Conleth O'Maonaigh, Trudy O'Keefe, Judith Ophel, John Reaume, Anna Reid, James Rourke, Leslie Rourke, Alan Ruddiman, Yogi Sehgal, John Soles, Neal Stretch, Margaret Tromp, Patty Vann, Peter Wells, Art Wiebe and John Wootton.

Recipients of the first fellowships in rural and remote medicine.

Un moment historique : les premiers associés en médecine des milieux ruraux et éloignés

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Le mois dernier, à Halifax, en Nouvelle-Écosse, la Société de la médecine rurale du Canada accordait ses premiers titres d'associés en médecine des milieux ruraux et éloignés. Il s'agissait d'un moment historique au cours duquel les réalisations universitaires et le leadership ont été applaudis.

Je me souviens d'un autre moment historique à Roma, au Queensland, en 1999, lorsque j'ai été témoin de l'attribution, par l'Australian College of Rural and Remote Medicine (ACRRM), de quelques-uns de ses premiers certificats d'associés en médecine des milieux ruraux et éloignés. À cette époque, l'ACRRM était une organisation locale mais elle réunissait de nombreux universitaires éminents. Quand il est devenu de plus en plus apparent que la médecine générale en milieu rural exigeait des normes différentes de celles qui s'appliquent en milieu urbain, l'ACRRM est devenue un organisme de normalisation et un prestataire de formation postdoctorale reconnue par l'Australian Medical Council.

L'Australie est un pays différent du Canada, et nous devrons trouver notre propre façon de répondre aux besoins de ceux et celles qui désirent pratiquer la médecine rurale au Canada. Cela dit, il est également de plus en plus clair qu'il faut une certaine base de connaissances et de compétences ainsi que du courage pour s'épanouir et prospérer dans la pratique rurale.

Les villes de moins de 10 000 habitants comptent pour 22,2 % de la population du Canada, et pourtant, elles ne sont desservies que par 10,1 % des médecins. Tous les médecins en milieu rural ont un statut particulier : ils travaillent en tant que généralistes qualifiés dans un système conçu pour des surspécialistes. Nos lauréats n'ont pas mérité ce certificat pour leurs beaux yeux. Il a été octroyé selon un système de points fondé sur le mérite universitaire et le leadership. Les médecins admissibles au titre d'associé se classent dans le premier percentile des médecins ruraux au pays.

Comme il s'agit de la première année du programme, nous avons attribué un grand nombre de certificats d'associés.

Félicitations, donc, aux Drs Rita Affleck, Carolyn Atkinson, Granger Avery, Ken Babey, David Beach, Gordon Brock, Garth Campbell, Abraham de Klerk, Dale Dewar, Herbert Dickieson, Charles Eckfeldt, Carl Eisener, Peter Englert, Yvon Gagnon, Bent Hougesen, David Howe, Peter Hutten-Czapski, Michael Johnston, Stuart Johnston, Mary Johnston, Beverley Karras, Diana Kelland, Len Kelly, Don Klassen, Jill Konkin, Maurice Lamarche, Trina Larsen Soles, Mary Ellen McColl, Kate Miller, Kenneth Murray, Doug Myhre, Conleth O'Maonaigh, Trudy O'Keefe, Judith Ophel, John Reaume, Anna Reid, James Rourke, Leslie Rourke, Alan Ruddiman, Yogi Sehgal, John Soles, Neal Stretch, Margaret Tromp, Patty Vann, Peter Wells, Art Wiebe et John Wootton.

President's message. "Who do I get next?"

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When I started practice in Beamsville in 1985 I was assigned the office of a physician who had recently retired. He was one of the founders of the College of Family Physicians of Canada, an early president of that organization. Always available to his patients, his cottage was 30 minutes away from town, which allowed him to respond to his patients' needs when vacationing with his family. A typical rural doc, his practice included obstetrics, hospital care, emergency medicine, house calls, and so on. He was well known and respected in town and in the medical community. After he devoted his life to his patients' health care, upon his retirement, I would have expected his patients to say things such as, "I'm so sad he's retiring," "Please thank him for all he's done" or "He was a wonderful doctor; no one could ever replace him."

Most commonly heard from his patients was, "Who do I get next?" As a young doctor, I felt some bitterness. Don't they appreciate us? They seem incredibly ungrateful.

Of course, his patients were right. My patients will have the same concern, as will yours. We physicians are very important to our patients as long as we're looking after their needs. Once we stop providing care, the appropriate question for them to ask is, "Who do I get next?" Our patients are at the centre; their health and their health care is most important.

Since our inception in 1992, the Society of Rural Physicians of Canada has worked for sustainable health care for rural Canadians. To date, our focus has been to promote sustainable conditions and an adequate supply of appropriately trained physicians. Although each of us cares for patients together with nurses, nurse practitioners, pharmacists and other health care professionals, as an organization our collaboration with these professions has been occasional at best.

If we really want to improve the health and health care of rural Canadians, we need to work with all health care workers in rural Canada. In addition, we need health research focused on this population, which has been largely ignored by the research community yet has different patterns of illness and perhaps also different indicators of health. We also need to include the community — the people we serve.

Our society has grown and matured. With over 2000 members, one of the biggest annual meetings of rural physicians in the world, many health ministers interested in our opinions, and regular interaction with the other national medical organizations, we are in a position to lead the formation of a national rural health coalition. This could be composed of national organizations representing rural and remote health care workers, rural health researchers, training programs for rural health workers, and rural communities. We can learn from and educate each other and we can find common ground, so we can speak with a common voice for rural health. Each group will be stronger and rural Canadians' voices will be better heard.

We've started a movement. Let's broaden it to include the colleagues we work with every day, and the people we all serve, in order to answer the important question, "Who do I get next?"

Message du président. «Qui vais-je avoir maintenant?»

Karl Stobbe, MD, CCFP(EM), FCFP
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Quand j'ai commencé ma pratique à Beamsville en 1985, j'ai pris la place d'un médecin qui avait récemment pris sa retraite. Il était l'un des fondateurs du Collège des médecins de famille du Canada et l'un de ses premiers présidents. Il était toujours disponible pour ses patients. Son chalet n'était qu'à 30 minutes de la ville, ce qui lui permettait de répondre aux besoins de ses patients même quand il était en vacances avec sa famille. C'était un médecin rural typique : il faisait de l'obstétrique, travaillait à l'hôpital et à l'urgence et faisait des visites à domicile. Il était bien connu et respecté dans sa ville et dans la communauté médicale. Il a consacré sa vie à ses patients. Au moment de sa retraite, je me serais attendu à ce que ses patients fassent à son sujet des commentaires du genre : «Je suis tellement triste qu'il ait pris sa retraite», «Pouvez-vous le remercier pour tout ce qu'il fait» ou «C'était un merveilleux docteur, personne ne pourra jamais le remplacer».

Or, ce que j'entendais le plus souvent de ses patients, c'était ceci : «Qui vais-je avoir maintenant?» En tant que jeune médecin, j'ai ressenti une certaine amertume. Ne sont-ils pas reconnaissants envers nous? Ses patients me semblaient incroyablement ingrats.

Pourtant, les patients avaient raison. Mes patients auront la même préoccupation, et les vôtres aussi. Nous, les médecins, sommes très importants aux yeux de nos patients, tant que nous sommes là pour eux. Une fois que nous cessons de fournir des soins, il est tout à fait normal qu'ils se posent la question : «Qui vais-je avoir maintenant?» Nos patients sont au centre, et leur santé et les soins de santé sont de la plus haute importance.

Depuis sa création en 1992, la Société de la médecine rurale du Canada a travaillé pour le développement d'un système de santé viable pour les Canadiens des régions rurales. À ce jour, notre objectif a été de promouvoir des conditions durables et de voir à ce qu'il y ait suffisamment de médecins qualifiés. Bien que chacun de nous prenne soin de patients avec les infirmières, les infirmières praticiennes, les pharmaciens et d'autres professionnels de la santé, en tant qu'organisation, notre collaboration avec ces professions a été, au mieux, sporadique.

Si nous voulons vraiment améliorer la santé et les soins de santé des Canadiens des régions rurales, nous devons travailler avec tous les professionnels de la santé dans ces régions. En outre, il faut entreprendre des travaux de recherche sur la santé de cette population que la communauté de la recherche a largement ignorée, mais qui présente une pathologie aux caractères particuliers, voire même des indicateurs de la santé distinctifs. De plus, nous devons inclure aussi la communauté, c'est-à-dire les personnes que nous servons, dans notre stratégie

Notre société a grandi et acquis de la maturité. Nous comptons plus de 2000 membres, tenons une des assemblées annuelles de médecins ruraux parmi les plus importantes au monde, sommes sollicités pour nos opinions par de nombreux ministres de la Santé et entretenons des liens avec les autres organisations médicales nationales. Nous sommes donc en mesure de diriger la création d'une coalition nationale sur la santé en milieu rural.

Cette coalition pourrait être composée d'organisations nationales représentant les professionnels de la santé des régions rurales et éloignées, des chercheurs en santé, des responsables de programmes de formation pour les professionnels de la santé en région rurale, et les communautés rurales. Nous pouvons apprendre les uns des autres et trouver un terrain d'entente pour parler d'une voix commune. Chaque groupe en ressortira renforcé, et les voix des Canadiens ruraux seront mieux entendues.

Nous avons lancé un mouvement. Élargissons-le pour inclure les collègues avec qui nous travaillons tous les jours et les gens que nous servons tous, afin de répondre à cette importante question : «Qui vais-je avoir maintenant?»

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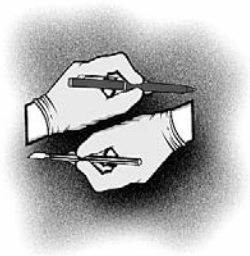

Original Article
Article original

Teaching children's mental health to family physicians in rural and underserviced areas

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This article has been peer reviewed.

Objective: To evaluate a curriculum for teaching family physicians (FPs) in rural and underserviced areas about children's mental health, and to evaluate a collaborative model of teaching using child psychiatrists and FPs.
Methods: A child psychiatrist and a rural FP provided training to rural FPs in attention-deficit/hyperactivity disorder (ADHD) and disruptive behaviour disorders (DBDs). Training consisted of a half-day workshop in 11 communities located in southwestern Ontario. Workshops included didactic teaching, observation of standardized videos demonstrating interviewing skills, and interactive discussion. Participants completed pre- and posttraining questionnaires about their confidence in managing these conditions, and completed standardized questionnaires on the effectiveness of the workshop and videos. One month after the training, participants were randomly assigned to receive individual interviews. Three months later 2 questionnaires were mailed to participants for evaluation of their confidence after their training and for evaluation of the impact on their practice.
Results: Fifty-six FPs attended the workshops and, of these, 80% completed the study. Family physicians reported improved confidence in their abilities to diagnose and treat ADHD and DBDs after the training.
Conclusion: Didactic presentations by child psychiatrists and FPs, followed by video examples of interviewing skills, and informal discussions with small groups, was found to be an effective curriculum for teaching rural FPs about children's mental health.

Objectif : Évaluer un programme de formation en santé mentale des enfants à l'intention des médecins de famille des régions rurales et sous-desservies, ainsi qu'un modèle de formation fondé sur une collaboration entre pédopsychiatres et médecins de famille.
Méthodes : Un pédopsychiatre et un médecin de famille rural ont offert à des médecins de famille ruraux une formation sur le trouble déficitaire de l'attention avec hyperactivité (TDAH) et les troubles de comportement perturbateurs (TCP). Cette formation a pris la forme d'ateliers d'une demi-journée offerts dans 11 communautés du sud-ouest de l'Ontario. Les ateliers incluaient l'enseignement de notions théoriques, le visionnement de vidéos standardisées, une formation sur les techniques d'entrevues et une discussion interactive. Les participants ont répondu à des questionnaires avant et après la formation portant sur leur degré de confort vis-à-vis de la prise en charge de ces troubles et ils ont répondu à des questionnaires standardisés sur l'efficacité de l'atelier et des vidéos. Un mois après la formation, on a assigné aléatoirement les participants à des entrevues individuelles. Trois mois plus tard, on a posté aux participants 2 questionnaires sur leur degré de confort après la formation et sur l'impact de la formation sur leur pratique.
Résultats : Cinquante-six médecins de famille ont participé aux ateliers et parmi eux, 80 % ont mené l'étude à terme. Les médecins de famille ont dit qu'après avoir suivi la formation, ils avaient acquis une plus grande confiance en leur capacité de diagnostiquer et de traiter le TDAH ou les TCP.
Conclusion : Des exposés théoriques des pédopsychiatres et des médecins de famille suivis d'exemples vidéos de techniques d'entrevues et de discussions informelles par petits groupes ont constitué un programme efficace de formation en santé mentale des enfants à l'intention des médecins de famille ruraux.

INTRODUCTION

Many shared care initiatives have occurred between psychiatrists and family physicians (FPs) in Canada,[1–4] and there has been a growing interest in the area of children's mental health.[5–7] Child and adolescent mental health problems are the leading health problems that face Canadian children after infancy.[8] Since child psychiatrists are concentrated in large urban centres, FPs in rural and underserviced areas are essential for the assessment and treatment of children and adolescents with mental health problems.[9]

Child and adolescent mental health problems are prevalent, with 1 in 5 children having a diagnosable emotional and/or behavioural disorder.[10] It is estimated that 15%–20% of young people with psychologic or psychiatric problems are seen in primary care.[11]

A survey of child and adolescent mental health training in Canadian family medicine residency programs revealed minimal teaching of child psychiatry.[12] Since physician competency in the psychosocial aspects of medicine is most strongly related to residency and not to postresidency experience,[13] it is logical to assume that most FPs do not feel adequately equipped to detect and manage common child psychiatry problems.

This absence of training in child psychiatry is consistent with studies of FPs in other countries. These studies have indicated FPs feel uncomfortable, unskilled[14,15] and inadequately trained to diagnose child and adolescent psychiatric disorders.[16–20]

To determine the educational needs of FPs in the area of child and adolescent mental health, a cross-sectional cohort of FPs living in rural and underserviced areas of southwestern Ontario were surveyed with respect to their confidence, knowledge and skills in managing children's mental health problems.[7] The majority (84.3%) of respondents felt they needed more training in child and adolescent psychiatry. Of the respondents who wanted more training, most suggested the following: 1) continuing medical education (CME) in the community; 2) small-group teaching by a child psychiatrist; and 3) self-instructional packages. When FPs were asked to rank topics in child psychiatry in order of importance, behavioural disorders, attention-deficit/hyperactivity disorder (ADHD), problem adolescents and interviewing skills were ranked the highest. Based on the results, a curriculum for a half-day workshop was developed by child psychiatrists and primary care physicians to teach small groups of FPs in their own communities.

METHODS

Family physicians located in 11 rural and underserviced communities in southwestern Ontario interested in the management of child and adolescent mental health problems participated in this study.

About 3 months before the workshop date, invitations were mailed to FPs to participate in the study. Included with the invitation were a letter of information and consent, the workshop agenda, learning objectives, and a preaddressed and postage-paid envelope. A telephone follow-up was done for those who did not respond.

The 3.5-hour workshop, which was accredited by the College of Family Physicians of Canada, consisted of a teaching module focusing on ADHD, oppositional defiant disorder (ODD), conduct disorder (CD) and interviewing skills in children and adolescents. An FP and a child psychiatrist provided the teaching. Teaching involved a didactic presentation followed by 2 videos showing an interview of a child with ADHD and an adolescent with ODD and CD. This was followed by an outline of questions for discussion. The interviewers in the videotapes were child psychiatrists, and the child and adolescent were standardized. ("Standardized patients are trained actors who portray patients during an interview and physical examination with a medical student or doctor in training."[21]) Each participant received a reference booklet at the beginning of the workshop.

Before the start of the teaching each participant was asked to rate their confidence on a 4-point Likert scale. A questionnaire was administered before the training, which included questions about the impact of ADHD and ODD in their practice, physician confidence level and barriers to treatment. Immediately after the training session questionnaires were administered to assess the effectiveness of the educators and videotapes.

About 1 month after the workshop, telephone interviews were conducted on a random basis by an independent interviewer in reference to the educational usefulness of the workshop, the most effective and least effective part of the educational experience, suggestions for future workshops, and other comments. About 3 months after the workshop, 2 questionnaires were mailed to all participants attending the workshop to evaluate their posttraining confidence in their ability regarding the learning objectives, and the degree to which they thought the training improved their ability; and to evaluate the impact of the workshop on their practice, change in treatment practice, barriers and suggestions.

The module was evaluated quantitatively and qualitatively. Statistical Package for the Social Sciences (SPSS, Inc.) was used for quantitative frequency data. Telephone interviews and responses to open-ended questions were coded and categorized in a repetitive fashion using a systematic process to extract and interpret themes and illustrative quotes.[22,23] Frequency of categories and themes was calculated and 2 raters were used to establish interrater reliability of the themes identified from a sample of the telephones interviews.

RESULTS

Invitations were mailed to 574 rural FPs in southwestern Ontario, and 30% of the FPs responded. Of those who responded, 39% agreed to participate in the study. Out of the 67 FPs who consented to participate in the study, 84% attended the workshop; and out of the 56 who attended the workshop, 80% completed the study. The evaluations are based on 45 FPs who completed the study. Eleven communities participated. Greater than 70% of FPs rated the educators "very good to excellent." Most said the seminar met the stated goals and objectives. At least 60% of FPs rated the handouts and references supplied as "very good to excellent." Most of the FPs rated the 2 videotapes as "good to very good." Pre- and posttraining confidence levels for all learning objectives, including knowledge, attitude and skills, are reported in Figure 1. Results show that there was an increase in "somewhat confident" responses in all learning objectives.

Pre- and posttraining questionnaires

Out of 45 FPs completing the study, 33 physicians answered the MAINPRO-C pre- and posttraining questionnaires. Before the workshop FPs reported concerns with diagnosis, assessment, management, medication, referrals, time constraints, and demands from parents and schools. After the workshop FPs reported using better interviewing techniques and reported using ADHD scales. Family physicians' confidence increased in diagnosis and treatment, specifically for ADHD. Some FPs were more confident in prescribing medication. Other FPs gained more confidence in treatment and prescribing medication. There was still a need for ongoing information in ODD, interviewing, assessing and identifying,

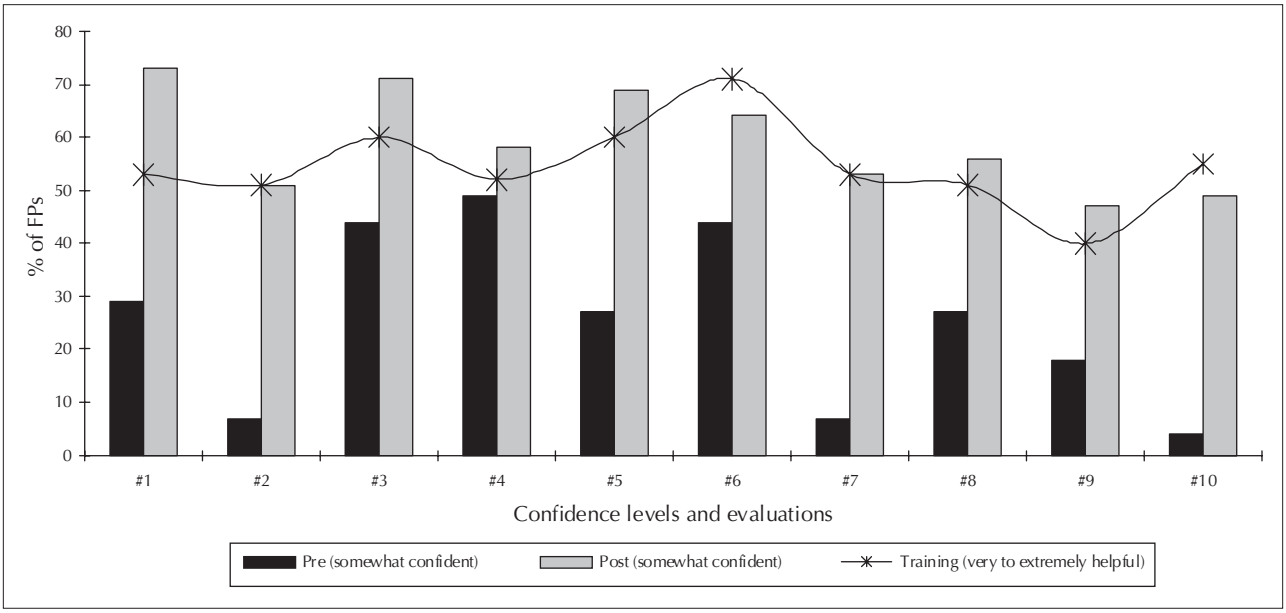

Fig. 1. Overall frequency percentage of pre- and posttraining confidence levels and posttraining evaluation of the workshop by 45 family physicians (FPs) completing the study, based on a 4-point Likert scale.
Knowledge: #1 = Describe the disruptive behaviour disorders; #2 = Develop a management plan for the child or adolescent with a disruptive behaviour disorder and their families; #3 = Describe the indications for referral to a psychiatrist or children's mental health professional.
Attitude: #4 = Appreciate the interacting biological, familial, social, cultural and psychological factors in the generation of disruptive behaviour disorders; #5 = Understand the factors that place a child or adolescent at risk for disruptive behaviour disorders both within the child or adolescent, and in the child or adolescent's environment; #6 = Recognize the importance of the role of the FP in the detection of disruptive behaviour disorders in children and adolescents.
Skills: #7 = Competently interview children and adolescents; #8 = Differentiate transient adjustment problems from more severe disruptive behaviour disorders; #9 = Differentiate individual from family problems; #10 = Manage a child or adolescent with a disruptive behaviour disorder.

managing, treating and medicating individuals with ADHD. Some FPs were still unsure of how to resolve problems with family conflict, family counselling, crisis management and access to new expensive drugs for financially disadvantaged families. Barriers in introducing new knowledge and skills, patients' reluctance to receive treatment, and parents' fears and lack of understanding of the disorders were still common issues. Family physicians suggested a need for more written material to keep information up to date, and education materials for parents, teachers and other health care professionals. Other suggestions included access to family counselling, specialist referrals when needed, local resources that used a team approach, and collaboration with the children's mental health network, along with a regional resource list of private and public services.

All respondents believed that the workshop was a good educational experience, very practical and well presented. Discussions and didactic information stood out as key features of the teaching experience. It was helpful to share other colleagues' problems and solutions, to review the criteria for diagnosing, monitoring and intervention, and to share feedback from the presenters.

DISCUSSION

This study is the first to evaluate a curriculum in which a child psychiatrist and a rural FP taught FPs in rural and underserviced communities in a half-day workshop about children's mental health. The curriculum was effective as a learning experience and FPs who participated believed their confidence in knowledge, skills and attitudes for the treatment of ADHD, ODD and CD improved.

Because of their significant practice workload, one of the challenges for FPs working in rural and underserviced communities is attendance at CME activities. Family physicians prefer learning in small groups in their home community.[24,25] In this study, although the workshop was delivered in the FPs' home communities, only 10% of all local FPs participated in the educational workshop. A combination of "home town" presentations and "rural conference" presentations might be explored. In addition, supplementing the CME opportunities with other types of learning opportunities such as shared mental health care clinics, telepsychiatry, outreach and guidelines for FPs would be beneficial.[26]

The primary strengths of the workshops were the opportunity for small-group attendance with a combination of didactic teaching and discussion. Physicians were able to relate to the problems and solutions of other FPs and were able to ask a child psychiatrist specific questions about their practice. Previous studies on teaching FPs about mental health have also indicated that a group setting is indispensable for achieving effective feedback[27] and that it is important for participants to raise questions and discuss problems that arise in their own clinical practice.[28] Incorporating multiple strategies,[27] which was done in our study, by combining didactic teaching, videotapes to simulate cases and small group discussion, is recommended for CME activities with FPs. Having the sessions co-facilitated by a child psychiatrist and an FP who practised in a rural community appears to have led to a greater understanding of local demands. The importance of having the teaching co-facilitated by a psychiatrist and an FP has not been cited in the literature as a critical element. Rural FPs are able to relate to the rural FP who is facilitating with the child psychiatrist. Family physicians provide an opportunity to stimulate discussions, as the FP facilitator has the first-hand experience and insight to emphasize and relate to rural practice. The child psychiatrist can bring the expertise in child and adolescent mental health. Having a child psychiatrist meet a number of FPs in a half-day workshop in the FPs' rural community reaches more FPs and their patients compared with a psychiatrist seeing 1 patient at a time. To have workshops face-to-face is a more informal approach which may lead to more open discussion and sharing of experiences.

Based on the results of the needs assessment in rural and underserviced areas of southwestern Ontario[7] the curriculum for the half-day workshop was developed by primary care physicians and psychiatrists, which has also been cited in the literature as a key element for an ideal CME activity.[28] Objectives were created for each of the domains of knowledge, skills and attitudes.[28]

Videotapes were developed to be representative of referrals that child and adolescent psychiatrists had obtained from FPs. The videotapes did stimulate questions and discussions about interviewing skills with a child or adolescent. One way in which the curriculum studied could have been enhanced would be to have the FPs practise new skills under observation[28–30] and then provide individualized feedback.[27]

Another strength of the study was that the workshop was evaluated both quantitatively and qualitatively. The participants were not only asked

about their satisfaction with the workshop, the teachers and the tools provided, but also whether they believed their confidence in their knowledge, skills and attitudes had improved as a result of the workshop.

Since there are very few studies addressing the teaching of FPs in rural and underserviced communities, and few studies addressing the teaching of FPs about child and adolescent mental health issues, we plan to complete a needs assessment in several provinces in Canada to determine what FPs in rural communities would like to learn more about in the area of child and adolescent mental health and how they would like to learn. Following the needs assessment various currriculae will be developed based on the results of each province's needs assessment that will incorporate the key elements of adult learning principles and evaluation quantitatively and qualitatively.

CONCLUSION

The findings of this study suggest that didactic presentations followed by video examples of interviewing skills, and informal discussions with small groups were an effective curriculum. Small groups having face-to-face encounters motivates discussions and brings about the sharing of experiences and solutions. The other key features were to provide a CME activity in the FPs' home community and to have both a rural FP and a child psychiatrist facilitate the teaching.

Acknowledgements: This program met the accreditation criteria of the College of Family Physicians of Canada and has been accredited for 3.5 MAINPRO-C credits. The AMS/ Senior Fellowship Award funded this study.

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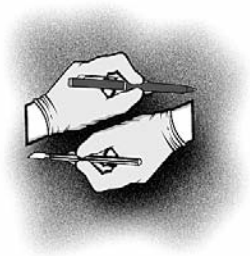

ORIGINAL ARTICLE
ARTICLE ORIGINAL

Meeting Canadian Emergency Department Triage and Acuity Scale benchmarks in a rural emergency department

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This article has been peer reviewed.

Introduction: The Canadian Emergency Department Triage and Acuity Scale (CTAS) was implemented in 1999. The CTAS aims to more accurately define patients' needs for timely care and provide operating objectives to standardize this care. These objectives are not being met across Ontario. The purpose of this study was to determine if the CTAS benchmarks were being met at a rural emergency department (ED).
Methods: All ED visits to South Huron Hospital from Apr. 1, 2003, to Mar. 31, 2004, were reviewed. The percentage of visits receiving each CTAS category (I–V) was calculated. The median and 90th percentile time to physician initial assessment (PIA) were quantified by CTAS level.
Results: There was a total of 10 286 ED visits with 113 (1.1%) excluded because of missing triage codes. The percentage of visits assigned to CTAS categories I to V was 0.3, 2.4, 16.0, 42.7 and 38.5, respectively. Time to PIA in minutes was 1, 12, 24, 28 and 27 for CTAS I to V, respectively.
Conclusion: The CTAS guidelines for PIA were met at this rural ED.

Introduction : C'est en 1999 que l'on a adopté l'Échelle canadienne de triage et de gravité (ECTG). Cette échelle vise à définir avec plus de précision les besoins des patients afin qu'ils reçoivent les soins appropriés sans retard, mais aussi à établir les objectifs de rendement afin de standardiser ces soins. Or, en Ontario, on note une certaine disparité quant à l'atteinte des objectifs fixés. La présente étude avait pour but de déterminer si les objectifs de l'ECTG étaient atteints dans un service d'urgence rural.
Méthodes : Toutes les consultations au service d'urgence de l'Hôpital South Huron entre le 1 avril 2003 et le 31 mars 2004 ont été analysées. Le pourcentage de consultations auquel on a assigné une catégorie de l'ECTG (de I à V) a été calculé. Ensuite, la médiane et le 90^{e} percentile pour le temps d'attente avant l'examen médical initial selon la catégorie assignée à l'ECTG ont été établis.
Résultats : On a dénombré en tout 10 286 consultations au service d'urgence; on en a exclus 113 (1,1 %) qui n'avaient pas reçu de code de triage. On a établi comme suit les pourcentages des consultations assignées aux catégories I à V de l'ECTG : 0,3, 2,4, 16,0, 42,7 et 38,5, respectivement. Quant à l'attente avant l'examen médical initial, elle était de 1, 12, 24, 28 et 27 minutes pour les catégories I à V de l'ECTG, respectivement.
Conclusion : Ce service d'urgence rural a atteint les objectifs préconisés dans les directives de l'ECTG pour l'examen médical initial.

INTRODUCTION

The Canadian Emergency Department Triage and Acuity Scale (CTAS) was implemented in 1999.[1] The main goals of the CTAS are to more accurately define patients' needs for timely care and allow emergency departments (EDs) to evaluate acuity levels, resource needs and performance against operating objectives.[2] Timely care is not only important for patient satisfaction,

but also can contribute to better health outcomes, as seen in the example of early thrombolytics administration for cases of acute myocardial infarction.[3]

On presentation to an ED the patient will be assigned a CTAS code (from I — resuscitation, to V — nonurgent) by the triage nurse. This indicates the time frame within which the patient should be seen by a physician for timely care (Table 1). This designation is based on the severity of the presenting complaint and is related to the predicted outcomes of the associated presenting complaint with delayed treatment.[4] The CTAS was adapted from the widely validated Australian National Triage Scale, and its reliability has been proven.[2,5,6]

The implementation of the CTAS guidelines has raised many issues for rural EDs. For example, it has been suggested that the guidelines for time to physician initial assessment (PIA) associated with more critically ill patients were unreasonable.[7] Many rural emergency physicians (EPs) are on call from home, making the CTAS time goals for high-acuity patients logistically unattainable. Concerns were also raised about the poor communication between ambulances and the ED, with the EP not being called in until the patient arrived at the hospital, and inadequate training of ED nurses in CTAS assignment, resulting in EPs being inappropriately called in to attend to nonurgent cases for the sake of CTAS adherence.[7] Overall, it was thought that adherence to the CTAS guidelines would increase the already difficult on-call burden placed on rural physicians. As a result, the CTAS guidelines were "ruralized" in 2003 to include the ability of the triage nurse to refer level-V patients to their family physician or more appropriate health care facilities, thus alleviating the need for the on-call EP to attend nonurgent cases.[7]

Recent studies have shown that the CTAS guidelines for time to PIA are not being met in EDs across Ontario and Canada.[8–10] Whether or not this finding is consistent in rural EDs has yet to be specifically documented in the literature. The purpose of this study was to determine whether CTAS benchmarks for time to PIA were being met in a rural Ontario ED.

METHODS

South Huron Hospital (SHH) is a small rural hospital that provides 24-hour emergency care for 4000 local residents of Exeter, Ont. There are 7 general practitioners working in Exeter, with an additional 7 who service the hospital's catchment area of about 20 000 people. Furthermore, 11% of the patients presenting to the SHH ED are "orphan patients" without a family doctor.[11]

The SHH ED uses an on-call EP, who is not required to remain on site but must be within 15 minutes travel time of the hospital when on shift. The ED uses the "ruralized" management of patients triaged at CTAS level V (nonurgent), including the ability to defer nonurgent patients to the morning or have the attending nurse discharge the patient without having seen the EP.[7] The average patient volume of the SHH ED is about 11 000 visits per year.

In addition to the ED, SHH fully funds a walk-in clinic located across the street. The clinic is open from 4 pm to 7 pm each weekday and from 11 am to 2 pm on weekends and holidays. It experiences an annual volume of 9000 patients, with an average of about 24 patients per day. The clinic serves to decrease the ED patient load during typical peak visit hours.

Table 1. Descriptions of Canadian Emergency Department Triage and Acuity Scale levels and guidelines for time to assessment by an emergency physician[1]

CTAS level	Level description	CTAS time to physician assessment for timely care, min
I — Resuscitation	Conditions that require resuscitation or threaten life or limb, requiring immediate aggressive intervention	"Immediately" (< 5)
II — Emergent	Conditions that are a potential threat to life, limb or function, requiring rapid medical intervention or delegated acts	≤ 15
III — Urgent	Conditions that could potentially progress to a serious problem requiring emergency intervention. May be associated with significant discomfort or affecting ability to function at work or activities of daily living	≤ 30
IV — Less urgent/ semiurgent	Conditions related to patient age, distress, or that have the potential for deterioration or complications would benefit from intervention or reassurance	≤ 60
V — Nonurgent	Conditions that may be acute but are nonurgent or part of a chronic problem without evidence of deterioration	≤ 120

CTAS = Canadian Emergency Department Triage and Acuity Scale.

Data collection consisted of retrospective review. All ED visits to SHH from Apr. 1, 2003, to Mar. 31, 2004, were reviewed using the National Ambulatory Care Reporting System. Visits were excluded if they did not have a documented CTAS score, nurse triage time or time to PIA. The proportion of visits assigned to each CTAS category and for each disposition was calculated. The cohort median and 90th percentile times to PIA for each CTAS level were quantified. The data were compared with Ontario and other Canadian hospitals. Ethical approval for this study was granted by the SHH Medical Advisory Committee.

RESULTS

A total of 10 286 visits to the SHH ED took place between Mar. 31, 2003, and Apr. 1, 2004. Of these, 113 (1.1%) were excluded because of incomplete recording of CTAS assignment or absence of visit timeline data in the medical records, yielding a final sample of 10 173 visits. The mean patient volume was over 28 patient visits per day. The percentage of visits assigned to CTAS categories I to V is shown in Table 2. The median time to PIA in minutes for CTAS patients I to V was 1, 12, 24, 28 and 27, respectively, which meets the CTAS benchmark in each category (Fig. 1). Furthermore, the median time to PIA at SHH surpasses the results from 163 Ontario hospitals and 8 other Canadian hospitals in each category. The time to PIA for the 90th percentile of SHH ED visits was also found to be better than that of the provincial values in each CTAS category, and met the CTAS guideline for levels IV and V.

DISCUSSION

The purpose of this study was to determine whether the CTAS benchmarks for timely patient care were being met at a rural ED. The results confirm that the CTAS time guidelines were met in all 5 triage categories at this rural ED. These findings can be directly contrasted to those published in the Canadian Institute for Health Information (CIHI) report on ED wait times.[9] The CIHI report showed that the median wait times for PIA from data collected from 163 Ontario EDs and 8 others across Canada did not meet the established benchmarks for patients assigned a CTAS level of I, II or III. The CIHI data for the 90th percentile of visits did not meet the CTAS guidelines in any triage category. Other papers confirm that the CTAS guidelines are not being met provincially and nationally in all categories.[8,10] The question remains as to how certain hospitals are able to meet the CTAS guidelines and others are not.

The acuity of patients seen at SHH could have contributed to more timely care than has been documented elsewhere. In this study, only 18.7% of patients presenting to the SHH ED were triaged as CTAS level I, II or III. In contrast, the CIHI report[9] found that more than half (63%) of patients triaged in Greater Toronto Area hospitals were triaged with a CTAS score of I, II or III. The increased proportion of more critically ill patients in the urban setting may be contributing to delays in care, by overloading the system with this type of patient and preventing EPs from taking on more patients until the current patients are discharged. A rural ED with less volume and acuity may not encounter similar barriers to timely care, resulting in better adherence to the CTAS guidelines.

However, there may not be a difference in acuity between this rural hospital and hospitals in the Greater Toronto Area. Low-volume EDs are funded based on numbers of patients seen. High-volume

Table 2. Number of visits for each Canadian Emergency Department Triage and Acuity Scale category from Mar. 31, 2003, to Apr. 1, 2004

CTAS score	No. (%) of visits
I	34 (0.3)
II	249 (2.4)
III	1630 (16.0)
IV	4343 (42.7)
V	3917 (38.5)

CTAS = Canadian Emergency Department Triage and Acuity Scale.

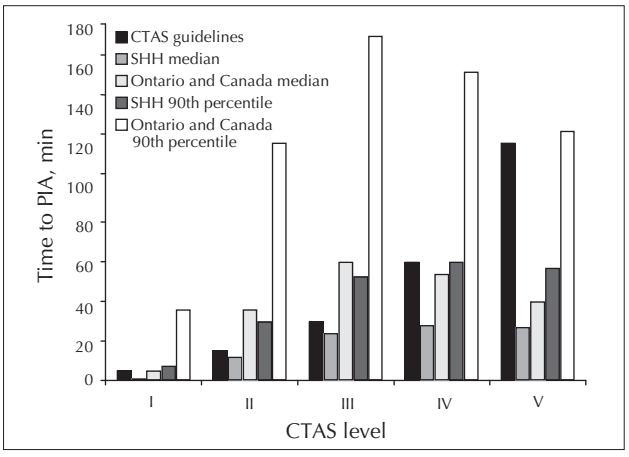

Fig. 1. Comparison of the Canadian Emergency Department Triage and Acuity Scale (CTAS) guidelines for time to physician initial assessment (PIA) by CTAS level against both the South Huron Hospital (SHH) and 163 Ontario and 8 other Canadian hospital[9] median and 90th percentile values.

hospitals are funded based on volume and acuity of patients. This would provide a financial incentive to "up code" patients to a higher CTAS level to increase funding for the ED. It is well recognized that health care providers are like anyone else and their behaviour can be motivated through financial incentives and payment models.[12] No study has been done to investigate whether this phenomenon exists and this may provide a direction for future research. Therefore, the excellent times to PIA in this rural ED compared with urban EDs and the provincial statistics may just be a reflection of a well-functioning ED.

Our experience at SHH may provide some insight into the delivery of timely care. As previously mentioned, SHH is fortunate to have a walk-in clinic associated with the hospital. This allows for significant diversion of low-acuity patients from the ED during typical peak hours. This strategy may be a factor in substantially reducing crowding in the ED and improving concordance with the CTAS guidelines. Therefore, patient diversion models may be worth examining further, as the possible implementation of parallel systems at other rural and urban sites may help decrease ED wait times, increase adherence to the CTAS guidelines and, most importantly, improve health outcomes.

There are clear differences between the methods through which large urban EDs and their rural counterparts can offer care. These differences must be taken into account when implementing strategies to decrease ED wait times and better meet the CTAS guidelines for timely patient care. As it has been previously asserted[10] there is certainly no "one size fits all" solution to the current problem.

Limitations and future research

This study compares only one rural ED to 163 other Ontario hospitals and 8 other Canadian hospitals. These results may be an anomaly and cannot necessarily be extrapolated to all rural EDs. Reviewing the CTAS data from multiple rural sites and comparing them with urban data would help address this limitation.

CONCLUSION

This paper demonstrates that the CTAS guidelines for PIA are met at this rural ED and are better than published medians and 90th percentiles from 163 Ontario hospitals and 8 other Canadian hospitals.

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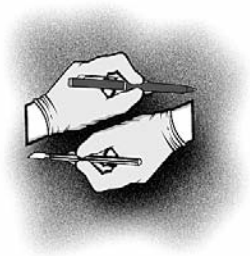

Original Article
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Issues related to medical students' engagement in integrated rural placements: an exploratory factor analysis

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Objective: The purpose of this study was to identify and investigate the factors derived from the rural integrated community clerkship (RICC) questionnaire that influenced the decision of medical students to pursue a 36-week rural community placement option.
Methods: A total of 162 first-year (n = 92) and second-year (n = 70) medical students completed the 35-item RICC questionnaire. We used qualitative interviews to develop questionnaire items, and we used subsequent descriptive statistics and exploratory factor analyses to analyze the data.
Results: Students with origins in rural communities were not significantly more likely to consider a RICC than their urban counterparts. However, students who identified family medicine as their discipline of choice were 3 times more likely to consider a RICC. Exploratory factor analysis, based on correlation of questionnaire items, determined 7 factors (themes) for the questionnaire. The questionnaire had strong internal reliability (Cronbach α = 0.94).
Conclusion: Although generally supportive of the rural clerkship option, students are less concerned about the clinical experience than they are about the practical implications of moving to a rural community. The RICC questionnaire was shown to have strong reliability and construct validity in measuring students' perceptions of a long-term clerkship placement in a rural community.

Objectif : Cette étude avait pour but de repérer et d'analyser au moyen du questionnaire sur le stage clinique intégré en milieu communautaire rural les facteurs ayant influencé la décision des étudiants en médecine d'opter pour un stage en milieu rural de 36 semaines.
Méthodes : En tout, 162 étudiants en médecine (première année, n = 92, et deuxième année, n = 70) ont répondu au sondage en 35 questions sur le stage clinique intégré en milieu communautaire rural. Nous avons préparé les éléments du questionnaire à partir d'entrevues qualitatives et nous avons utilisé des statistiques descriptives et des analyses de facteurs exploratoires subséquentes pour procéder à la synthèse les données.
Résultats : Les étudiants originaires de communautés rurales n'ont pas semblé significativement plus susceptibles d'envisager un stage clinique intégré en milieu communautaire rural que leurs collègues citadins. Toutefois, les étudiants qui avaient choisi la médecine familiale étaient 3 fois plus susceptibles d'envisager un stage clinique intégré en milieu communautaire rural. L'analyse des facteurs exploratoires fondée sur une corrélation entre les éléments du questionnaire a permis de recenser 7 facteurs (thèmes) pour le questionnaire, qui comportait au demeurant une forte fiabilité interne (coefficient α de Cronbach = 0,94).
Conclusion : Bien que généralement favorables à l'option de stage clinique en milieu rural, les étudiants semblent moins préoccupés par le contenu clinique que par les répercussions de leur déménagement en milieu rural. Le questionnaire sur le stage clinique intégré en milieu communautaire rural s'est révélé doté d'une fiabilité et d'une validité conceptuelle suffisamment solides pour rendre possible une évaluation des perceptions des étudiants quant à l'option d'un stage clinique prolongé en milieu rural.

INTRODUCTION

It is clear that the shortage of primary care physicians has become critical in rural communities. In general, the 2 most important factors that have been linked with a physician's decision to pursue a rural practice are whether they have originally come from a rural background and whether they have had previous training experience in a rural community setting.[1–4] One method that clearly increases students' exposure to a rural setting is for medical schools to promote an entire year of undergraduate clinical curriculum as a rural integrated community clerkship (RICC).[1,5–8]

These long-term rural training periods have led to criticisms that the academic standards of the medical students are being compromised by political agendas.[5] In contrast, recent studies have shown that students who have participated in a long-term rural placement have performed as well as or better than their urban counterparts on licensing examinations. A study by Worley and colleagues[9] focused on the specific effects that a rural community placement would have on medical students' academic performance during year 3, compared with those students who chose either a tertiary teaching or regional secondary referral hospital. Post hoc tests of means adjusted for age, sex and year-2 academic performance showed that the medical students placed in rural and regional secondary hospital settings performed significantly better on achievement examinations than the students placed in urban teaching hospital settings. In comparisons between rural integrated community and traditional block-rotation clerkships, Verby[7] in Minnesota and, more recently, Schauer and Schieve[8] in North Dakota found no difference in the performances of medical students on licensure examinations, and the latter showed significantly higher scores on internal medicine clinical preceptor assessments for the students in the rural program. In general, the findings provide support for the academic rigour and clinical experiences that a rural community clerkship placement option provides to undergraduate medical education programs.

In addition to ensuring academic quality, most medical schools tend to encourage and recruit rural-oriented medical students to their rural community clerkship programs.[10,11] In particular, studies of rural physicians from various countries have shown that they are more likely than urban physicians to have lived previously in a rural community.[2–4] As shown by Rourke and colleagues,[4] rural physicians, compared with their urban colleagues, were significantly more likely to have been raised in a rural community (35% v. 15%), have had rural clerkship training during medical school (55% v. 35%) and have had 8 or more weeks postgraduate residency training in a rural location (39% v. 20%). In a retrospective study of Jefferson Medical College graduates who had participated in a rural medical education stream and were practising in Pennsylvania at the time, regression analysis showed that previous rural background, over all other independent variables (e.g., participation in rural placement, specialty interest), was the overwhelming predictor of eventual practice in a rural community.[3]

The main purpose of the present study was to determine the factors that influence the decisions of medical students to consider a RICC option. In addition, we investigated the reliability and validity of the 35-item RICC questionnaire we developed to identify the perceived advantages and disadvantages of a long-term rural community clerkship placement.

METHODS

All preclerkship students in both the first year (class of 2009) and the second year (class of 2008) of the Undergraduate Medical Education Program at the University of Calgary were surveyed in the fall of 2006 about their potential interest in a proposed 36-week RICC experience during the third year of their program. This study received approval from the Conjoint Health Research Ethics Board of the University of Calgary.

Instrument

In the development of the RICC questionnaire, we used interviews with medical students from the first and second years of the University of Calgary's Undergraduate Medical Education Program to initially identify common themes. Subsequently, 35 positively worded items, measured on a 5-point Likert scale (1 = strongly disagree, 5 = strongly agree), were developed, along with a set of demographic questions about sex, age, marital status and size of the community in which the respondent was primarily raised (e.g., rural, small city, medium city, metropolitan centre). In addition, the students were asked to either select from a list or identify in writing their potential career path on graduation from medical school and respond to a question as to whether they would consider the RICC option for their third

year. It should be noted that the class of 2009 was the first class to be eligible for the RICC option as part of the redesigned clerkship curriculum initiative currently underway at the medical school.

Analysis

We used descriptive statistics to analyze the demographic data. Using SPSS software, we used an exploratory factor analysis to look at patterns in responses to see if there were inter-item correlations both within and between students as a function of how they responded to the items on the questionnaire. Items that correlate highly load together as a factor and are a measure of a common theme. For example, if 9 questionnaire items load on a factor, the wording of each of the 9 items is integrated to develop a description of the theme.

RESULTS

The overall response rate was 66% based on 162 of the 245 preclerkship students returning the questionnaire, with responses from 92 first-year and 70 second-year students. Overall, an equal number of male and female students responded; 51% of the first-year students and 48% of second-year students were male. The average age of the first-year respondents was 24.8 (standard deviation [SD] 4.38) years and 27.7 (SD 4.41) years for the second-year respondents. With respect to marital status, 81% of first-year and 70% of second-year students indicated that they were single (and without children). In response to a question about the type of community in which they were primarily raised, 22% of the first-year students and 19% of the second-year students indicated that they lived in a rural community with a population of less than 10 000 people.

Although 34% (n = 55) of the students indicated that they would consider the RICC option in their clerkship year, more interest in this option was expressed by the first-year students (40%) than the second-year students (27%). First-year students were also found to be more "undecided" (40%) than second-year students (7%) about their medical career plans beyond graduation, but comparably similar with respect to their interest in pursuing a family medicine discipline (first year 17%, second year 21%). Students who identified their community of origin as rural were not significantly different from students from an urban origin when asked if they would consider the RICC option (χ^2 [1108] = 1.79, p = 0.18). However, those students that identified family medicine as their planned discipline on graduation from medical school were almost 3 times more likely to consider the RICC option than those students looking to pursue a specialty discipline (88% v. 29%; χ^2 [1.83] = 23.67, $p < 0.001$) (Table 1). As illustrated in Table 1, students from both rural and urban origins who were undecided about their career plans were nearly identical in their consideration of the RICC option.

The questionnaire was shown to have strong internal reliability (Cronbach α = 0.94). The exploratory factor analysis of the RICC questionnaire resulted in the identification of 7 discrete RICC factors or themes as follows: 1) physician role/responsibility/exposure/preparation, 2) practice exposure/exam preparation, 3) collaboration with other health care professionals, 4) exposure to rural medicine, 5) support of undergraduate medical education program/medical school, 6) personal implications for a rural community placement and 7) maintain existing/develop new professional relationships (Table 2). As shown in Table 2, some of the factors were represented by a greater number of items than others and subsequently are a better measure of the reliability of the factor. The mean scores for select items from each of the 7 identified factors illustrate that the perceived advantages of a RICC placement include an opportunity to increase both exposure to diverse patients and responsibility for patient care, as demonstrated by students' responses to items such as "I will have more opportunity for hands-on learning (procedures)" (mean score 4.32,

Table 1. Percentages of medical students who would consider a rural integrated community clerkship, by community of origin and identified family medicine or specialty discipline*

Community of origin, no. (%)	Career plans/ residency discipline	Would consider RICC (across career plans), %	
		Yes	No
Rural, 24 (22)			
	Family medicine	91	9
	Specialty	0	100
	(Undecided)	(71)	(29)
Urban, 84 (78)			
	Family medicine	85	15
	Specialty	32	68
	(Undecided)	(67)	(33)
Total, 108 (100)			
	Family medicine	88	12
	Specialty	29	71
	(Undecided)	(68)	(32)

RICC = rural integrated community clerkship.
*Missing responses to community of origin, career plans or undecided on RICC not included.

SD 0.64) and "I will gain valuable exposure to rural medical practice" (mean score 4.69, SD 0.61), respectively. The main concerns students appear to have about the RICC option are related to the "Personal implications of a rural community placement" factor such as "Moving (including my family) to a

Table 2. Mean responses of medical students using a 5-point Likert scale and salient item loadings for the 35 items from the 7-factor model for the rural integrated community clerkship questionnaire*

To what extent do you agree or disagree with the following statements about the RICC?†	Mean (SD) score	Item loading
1) Physician role/responsibility/exposure/preparation (9 items; $\alpha = 0.89$)		
I will have more opportunity for hands-on learning (procedures).	4.32 (0.64)	0.75
I will have more opportunity to become a valuable member of the medical team.	4.17 (0.64)	0.75
I will be given more responsibility for patient care than in the traditional clerkship.	4.23 (0.67)	0.67
My preceptors will be able to write a more impactful reference letter for CaRMS.	4.03 (0.85)	0.66
I will receive more extensive teaching/feedback than in the traditional clerkship.	3.75 (0.82)	0.57
Continuity with a small number of preceptors will be enhanced.	4.27 (0.63)	0.57
I will have a greater opportunity to develop personal relationships with my preceptors and other physicians.	4.30 (0.63)	0.61
I will be better prepared to respond to comprehensive questions about patient care on the MCC exam.	3.66 (0.76)	0.53‡[2]
I will be more effective when I begin residency training.	3.46 (0.89)	0.46
2) Practice exposure/exam preparation (7 items; $\alpha = 0.79$)		
I will receive sufficient exposure to different practice styles.	3.67 (0.79)	0.70
I will receive adequate exposure to all areas of medicine.	3.52 (0.93)	0.65
I will be well prepared to write the MCC exam.	3.96 (0.66)	0.65
I will receive more comprehensive exposure to clinical presentations offered in the UME curriculum.	3.38 (0.81)	0.57
I expect to be better prepared for clerkship assessment examinations.	3.25 (0.80)	0.55
There will be more opportunity to understand how the management of a hospital/clinic is achieved.	3.91 (0.84)	0.44
I will have opportunity to learn more about all areas of medicine through patient-focused experiences.	3.74 (0.78)	0.40
3) Collaboration with other health care professionals (5 items; $\alpha = 0.85$)		
It will allow me to explore more comprehensive relationships with other allied health care professionals (e.g., pharmacists, nurses).	3.93 (0.74)	0.72
I will have more opportunity to get to know other members of the hospital/clinical community.	4.11 (0.68)	0.72
I expect to develop better collaborations with the other allied health care workers (e.g., pharmacists, nurses).	3.88 (0.68)	0.70
It will prepare me to be more patient-focused as a resident.	3.78 (0.74)	0.55
It will give me greater opportunity to work with nurses one-on-one.	3.95 (0.71)	0.51
4) Exposure to rural medicine (4 items; $\alpha = 0.72$)		
I will gain valuable exposure to rural medical practice.	4.69 (0.61)	0.72
I will receive valuable exposure to allied health care in the community.	4.29 (0.64)	0.66
I will learn more about the role of a physician in the community.	4.30 (0.59)	0.51
I will receive extensive exposure to continuity of patient care.	4.28 (0.68)	0.50‡[1]
5) Support of UME program/medical school (4 items; $\alpha = 0.65$)		
I'm satisfied that there is an adequate "safety net" for students if the RICC does not work out.	3.08 (0.76)	0.64
I will receive the same support from the UME Office as other clerkship options.	3.91 (0.71)	0.62
I will be treated fairly academically by the UME Office if a conflict with my preceptor arises.	4.09 (0.68)	0.60
I will see a wide range of undifferentiated patient problems.	4.00 (0.65)	0.59
6) Personal implications of a rural community placement (4 items; $\alpha = 0.64$)		
Moving (including my family) to a small community for 8 months is doable /practical.	2.86 (1.31)	0.75
I am not concerned about the social implications of living in a smaller community outside of the city.	2.94 (1.28)	0.71
Costs (e.g. accommodations, travel) of participating in the RICC are manageable.	3.72 (0.85)	0.50‡[5]
I will receive greater exposure to physician lifestyle than in the traditional clerkship	3.52 (0.42)	0.42
7) Maintain existing/develop new professional relationships (2 items; $\alpha = 0.54$)		
Although physically removed from the medical school I will be able to stay "connected" to my classmates.	2.85 (0.87)	0.70
I will have a greater opportunity to develop personal relationships with my preceptors and other physicians.	3.46 (0.94)	0.61

CaRMS = Canadian Resident Matching Service; MCC = Medical Council of Canada; RICC = rural integrated community clerkship; SD = standard deviation; UME = undergraduate medical education.

*Internal reliability of the 35-item RICC questionnaire is 0.94 (Cronbach α). Seven factor model accounts for 60% of the variance.

†1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree.

‡[#]Indicates that this item also loads > 0.40, but below this reported value, on another factor identified by a corresponding number (e.g., ‡[2] = this item also loads > 0.40 on the factor numbered "2").

small community for 8 months is doable/practical" (mean score 2.86, SD 1.31) and the "Maintaining existing professional relationships" factor in response to the item "Although physically removed from the medical school I will be able to stay connected to my classmates" (mean score 2.85, SD 0.87).

Significant differences were not observed between first- and second-year medical students' responses on any of the 35 RICC items. Significant differences were also not observed between male and female students for any of the 7 factors using an independent paired sample t test. Students who were married, with or without children, or single with children were, however, significantly more likely to rate the "Support for placement in rural community" factor lower than single students (t [158] = 2.39, $p < 0.05$). For students primarily raised in rural communities versus urban centres, a significant difference was not observed between these groups on any of the 7 factors identified. In comparing those students who chose a specialty that would limit them primarily to an urban-based practice, to those who had the potential to seek rural practices as a family doctor, the RICC placement option was scored significantly lower overall, and on all factors except the "Support of undergraduate medical education program/medical school" factor.

DISCUSSION

The main findings of the present study are as follows: 1) an exploratory factor analysis of the 35-item RICC questionnaire supports 7 factors that influence the decision of medical students to consider a RICC option, 2) students generally agree that there are educational benefits to be derived from a RICC placement option, 3) the major concerns of preclerkship students about a RICC placement are related to the personal implications of moving to a rural community and their ability to maintain existing professional relationships with classmates, 4) having a rural or urban community origin did not influence students' responses toward the RICC option, 5) students who are married or have children are significantly more likely to be concerned about the social and practical implications of accepting a rural community placement, 6) students' perceived career path as a family physician or specialist has a significant influence on whether a rural community clerkship placement would be considered.

As shown above, an exploratory factor analysis of the RICC questionnaire identified 7 factors that looked at a comprehensive list of students' concerns for consideration of a long-term rural community clerkship placement. In support of the content validity of the instrument, each of the named factors corresponded with themes identified in the interviews with students before the development of the specific items. One of the limitations of this study, however, was the relatively small sample size used for the factor analysis and the limited number of potential items used that could have supported the measurement of some factors.

Interestingly, most of the preclerkship students were supportive of the RICC placement on the factors related to the roles and responsibilities of being a physician, such as having more opportunity for hands-on learning, becoming a valuable member of a medical team, developing comprehensive relationships with other health care professionals and gaining valuable exposure to the practice of rural medicine. The major concerns had less to do with whether or not the students felt that they would obtain a rigorous clerkship experience in preparation for the future than with the practical aspects of dealing with a long-term move to a rural community. In particular, the greatest concerns expressed were related to the implications of simply moving to a rural community, dealing with the social limitations of living there, staying connected with existing classmates or colleagues, and knowing that the medical school would provide an appropriate way out of the RICC placement if the educational experience began to deteriorate.

Although the apparent popularity of the RICC option is positive, with up to 40% of first-year students indicating that they would consider the placement for their third-year clerkship, the students' concerns outlined above will need to be addressed appropriately if the program is to be successful. For example, undergraduate medical education programs will need to consider arrangements that support those students who are married and/or with children in making the move to the rural location, assist them in connecting with people in the community and provide reliable means of staying connected to their classmates and the medical school itself.

Most importantly, students who self-identified a residency discipline in family medicine that could quite possibly result in future practice in a rural location were significantly more likely to consider the rural placement option than those who were considering a specialty (88% v. 29%, respectively). Correspondingly, students' rural or urban community of origin was found to be nonsignificant when considering a RICC placement as a potential option for

clerkship. Although this contradicts previous findings of existing physicians in practice,[2–4] the results from the present study provide insight into the potential influence that students' career aspirations have on the eventual pursuit of a rural practice in family medicine. Limited by sample size in the present study, further research will be needed to investigate the confounding effects of students' discipline expectations on their subsequent decision to pursue rural medicine regardless of their initial community of origin. Support for initiatives that provide information and promote the generalist or family medicine discipline during transitional periods into second and third years of medical school are advised, as this may eventually translate into more students willing to commit to practice in a rural setting.

CONCLUSION

The 7 identified factors for the RICC questionnaire assisted in defining the general categories of advantages and concerns that preclerkship students have about a long-term rural community clerkship placement. The emphasis on ensuring that the practical aspects of dealing with the transitions of moving to a rural community appears to be of great concern to students, possibly more so than the issue of gaining a meaningful and rewarding clerkship experience in preparation for future practice on graduation. Further research in this area will examine the longitudinal development of the RICC questionnaire and monitor the performance of students in the RICC program.

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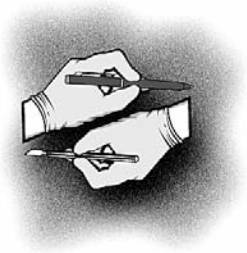

Discussion Paper
Document de discussion

Abridged version of the Society of Rural Physicians of Canada's discussion paper on rural hospital service closures

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INTRODUCTION

Although Canada's beleaguered health care system still produces outcomes among the best in the world, there are growing signs that this is not the reality for Canadians living in smaller or more isolated communities across the country.

Despite manifest rural–urban health inequity, regional management repeatedly finds it an easy decision to close, or hobble, a small peripheral hospital and transfer a portion of the funding for those services to the centre of power.

This paper is an abridged form of the Society of Rural Physicians of Canada's discussion paper on rural service closures[1] developed to examine the arguments and evidence for and against hospital and service closures.

THE "QUALITY" CASE FOR HOSPITAL AND SERVICE CLOSURES

Quality arguments for closures occur typically as veiled slurs on the rural institution that fly in the face of the evidence. Maternity care has been found to be as safe in smaller rural hospitals as in large specialist-run centres in northern Ontario. American studies have shown that if women have to travel to give birth, costs are higher and results are worse. Because of the evidence of safer local access, 3 large Canadian medical organizations joined to issue a statement on the need for rural maternity care in Canada with and without local cesarean capability.[2]

Appendectomies done in western Canada by general practitioners in rural communities had slightly fewer complications than those done in city hospitals.[3] Colonoscopies and other endoscopic procedures done by rural family doctors, when studied, are as high in quality as those done by specialists.[4,5] According to the Canadian Institute for Health Information all but 3 rare and highly specialized procedures are done as competently in low-volume centres in Canada as in high-volume centres.[6]

THE ECONOMIC CASE FOR HOSPITAL AND SERVICE CLOSURES

Conventional wisdom states that fewer hospitals ease administrative complexity and offer a potential for cost savings. Despite many rounds of restructuring, experiential evidence has not supported the assumption that even this 1-dimensional view of efficiency is achieved. The cost argument for the closure of rural hospitals rarely addresses the indirect costs, such as those related to ambulance use, or personal costs related to transportation, hotel accommodation, meals away from home, accidents getting to other communities and so on. When increased costs to the patient are assessed, total costs are found to increase.[7,8]

Even when you ignore such costs it is not clear that there will be savings from the closure of rural hospitals. Former Saskatchewan minister of finance Janice MacKinnon, reflecting back on the 1993 closure of 52 mostly very small rural hospitals, has estimated that only about $30 million was saved, which is far less than what was expected.[9]

The Manitoba Centre for Health Policy[10] did an analysis of hospital efficiency in Manitoba correcting for varying case mix (different patients with different medical conditions) between hospitals. The most efficient hospitals in Manitoba were found to be the full-service medium-sized rural hospitals such as the 30-bed Beausejour Hospital.

The report suggested that the most cost savings, 11% of the provincial inpatient budget, could be achieved from improving the efficiency of the largest hospitals to the level of the larger rural hospitals. This was not because the teaching hospitals were the most inefficient, but because they treated 35% of the inpatients and consumed 46% of the provincial inpatient budget. In contrast, although the smallest and most isolated rural hospitals were relatively inefficient, they only consumed less than 1% of the budget.

In an analysis of the Ontario hospital closures of 1996/97, when Ontario went from 223 to 150 hospital corporations, short-term analysis failed to show monetary gains.[11] The authors suggest that this paradox stems from unrealized potential gains, and the finding that large hospitals with high levels of tertiary care are "less efficient in the provision of outpatient and emergency care."

This is not to suggest that there are no potential financial savings from system changes, but rather to point out that hospital service closure is a blunt instrument.

REGIONALIZATION AND THE RIGHT NUMBER OF HOSPITALS AND SERVICES

There is no one "right" decision as to what health services will be provided to whom and where. It varies by geography. There are several basic services that for population safety and access need to be as close as possible to where people live and work. By analogy, it doesn't matter that fire halls are inefficient, as the vast majority of the time there is no fire to fight. That service is nonetheless needed in a timely fashion. Similarly, basic medical care is needed close to the patient.

Generally, emergency care, inpatient care and often obstetric care should occur when there is enough of a population base to sustain a complement of 5 or more physicians,[12] which is a bit more than 5000 people. This makes the call burden sustainable for most of the professions involved, and also invokes a hospital size that is efficient. These services might need to be supported locally in communities with smaller populations if the next location that can provide this care is more than half an hour transport away. In Ontario the ministry has used 40 km as the distance between hospitals that have 24-hour emergency department coverage.[13]

Closure by degree is sometimes supported by the argument that many of the emergency department visits are deferrable and could be seen by family physicians in their offices. This is true for all emergency departments, including those attached to large teaching hospitals.

There are other arguments that night volumes are so small that the emergency department should be closed after midnight. As with firefighting, the purpose of the infrastructure is to be available, regardless of the time of day, for the few cases in which timely intervention makes a difference.

When those in central planning are contemplating closure of services, local consultation with providers and the population is essential. Closure of services and hospitals must take the following elements into consideration:[14]

- local economic conditions including the role that health care institutions and services play in the local economy
- geography
- effect on the retention and recruitment of health care professionals
- transportation, which includes everything from ambulance services, to public transportation, to the state of the roads or air services to the regional centres, as well as the effect of weather on the ability to travel
- ensuring that services such as home care, ambulance services and telehealth are available in communities from which hospitals or services are being removed
- equity of access

THE CASE AGAINST CLOSURES

Closure of rural community hospitals has documented repercussions. Studies show a lower quality of care, decreased access to physician services, fewer employment possibilities[15] and increased per capita health care expenditure.[7,8,10] If there is no other

hospital in the community, per capita income can drop by 4% and the unemployment rate can increase by 1.6 percentage points.[16]

The largest impact of an imposed hospital closure is the impact on recruitment of new medical and nursing staff.

Fort Macleod is an Alberta town with a population of about 3000, situated 50-km west of Lethbridge. It's at the crossroads of 2 major highways and in between 2 of the largest First Nation reserves in Canada. Before 2003 the 5 doctors who worked there supported a full-service hospital, including obstetrics and surgery. In 2003 the hospital was converted into Fort Macleod Health Centre with 3 holding beds and a limited emergency department. Within 1 year the 2 newest doctors, who still had between them 20 years in town, had left, and another doctor semiretired. Nurses and radiography and laboratory technicians began looking for positions elsewhere, or retired. Now there is little to attract new physicians to the area. The town is continually trying to fill vacancies and has been consuming a significant portion of the provinces locum fund for rural doctors between 2005 and 2007.

In New Brunswick's Upper St. John River Valley a regional hospital was built in 2007 between Bath and Woodstock to replace 3 other hospitals, despite massive demonstrations in affected communities. The Woodstock doctors had a vibrant full-service hospital that was really a case example of how best to run a rural hospital. Since their hospital has been closed, the Woodstock doctors no longer provide inpatient care to the new hospital (except for obstetrics) as it is perceived as no longer being their hospital, but the region's.

One of the unintended consequences is that the change undermined the ability for the region to recruit, since current New Brunswick legislation would require any new doctor to admit patients to the hospital without being able to sign out to local physicians. In the meantime the region is subsidizing itinerant physicians to provide this care.

Another example of the unintended results of closures is that downsizing can actually decrease efficiency. In Strathroy, Ont., closure of the rehabilitation beds has destabilized the hospital. Inpatients that were once rehabilitated to go home or were having their condition stabilized while waiting for a nursing home bed, are now decompensating and having to remain at the hospital as long-term patients. In the drive to save money, efficiency and patient care decreased.

CONCLUSION

The issue of service and hospital closures is highly emotionally charged. The local community has much to lose and little or nothing to gain. Closures are the easiest to arrange when there is an alternative institution in the community. Closures of hospitals that would result in populations needing to travel under half an hour for care may be reasonable, if by so doing, the existing health care providers would agree to join together to form a larger group to share the burden of providing care.

Even if this were the case, it is not at all clear that efficiency would increase. The evidence that exists implies that without meaningful local input it is possible, if not likely, that costs will go up, access will decrease, and there will be negative ramifications for the local economy and for the recruitment of physicians.

Hospital service closures are not a substitute for system reform.

Competing interests: None declared.

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The occasional D & C

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Dilatation and curettage (D & C) is a surgical procedure involving a scraping or curettage of the lining of the uterus (endometrium). There are several elective and emergency reasons for performing a D & C:

- evacuation of remaining placental tissue in a postpartum woman
- evacuation of tissue following an incomplete miscarriage
- evacuation and examination of tissue that may be causing irregular, heavy or dysfunctional uterine bleeding
- termination of pregnancy

PATIENT PREPARATION

History

Before performing any surgical procedure, a pertinent medical, obstetric and surgical history is taken. This includes Rh and gravida status and anesthetic risk assessment. When appropriate, counselling about pregnancy options and postprocedure contraception should be offered. Following a discussion of complications, including discussion of blood transfusion, consent is obtained and booking completed.

Physical examination

Patients requiring this procedure are often otherwise healthy. If necessary, a physical examination can be done at the time of the procedure. It includes cardiovascular and airway assessment to ensure grade 1 sedation risk. Pap test, vaginal swabs for sexually transmitted infection (STI) testing and a bimanual examination are performed. Gestational age should be confirmed before misoprostol is given. For pregnancy terminations, ultrasonography may help to confirm gestational age.

PERIOPERATIVE MEDICATIONS

Anxiety

Perioperative anxiety can be treated with 1 mg of sublingual lorazepam. This does not significantly compound the effect of other sedating intravenous medication used later in the procedure.

Misoprostol

The use of buccal misoprostol has revolutionized cervical dilation. This medication softens and opens the cervix, making dilation quite easy. It is particularly useful in primiparous patients. Misoprostol 200–400 µg is taken bucally 2 hours before the procedure. It is less useful when the cervix has recently been or is currently dilated. Because of the prostaglandin effect, patients who have asthma that is currently active should not receive this medication. Common side effects include nausea, cramping, vaginal bleeding and diarrhea. Misoprostol can also be used to prevent significant postprocedure bleeding.

Perioperative antibiotics

All high-risk patients should receive 1 g azithromycin and/or 400 mg cefixime orally before the procedure for chlamydia and gonorrhea prophylaxis, respectively. All patients should receive 2 g metronidazole orally. Because of perioperative nausea from medication and pregnancy, it is acceptable for the metronidazole to be given after the procedure.

SURGICAL PROCEDURE TECHNIQUE

Equipment

Both hand-held Ipas syringe (Ipas MVA Plus Aspirator) and traditional Berkeley floor suction techniques will be described. Both require the same instrument tray. The Berkeley suction D & C requires a sized rigid or flexible curette with floor suction tubing. The Ipas technique requires a sized flexible curette and Ipas syringe (Fig. 1).

Instrument tray

The following instruments are required (Fig. 2):

- tray
- sterile kidney basin for holding tissue (Ipas technique)
- proviodine or chlorhexidine in a small cup
- ten 4 × 4 sterile radiopaque gauze
- 10-mL syringe
- small sterile metal cup with mixture of 20 mL of 1% lidocaine, 2 mL of 8.4% bicarbonate (used in Advanced Cardiac Life Support protocols) and 20 U vasopressin
- 25-gauge 1 $^1/_2$" needle
- nontraumatic (Teale) tenaculum and single-tooth tenaculum. Pratt 5-12 or Hegar dilators are also acceptable
- small and medium sharp curettes
- blunt curette for gravid postpartum uterus, and appropriately sized suction curette
- 2 small stainless steel bowls (1 for lidocaine mixture, 1 for chorhexidine)
- uterine sound
- stainless steel speculum
- Ipas syringe if needed

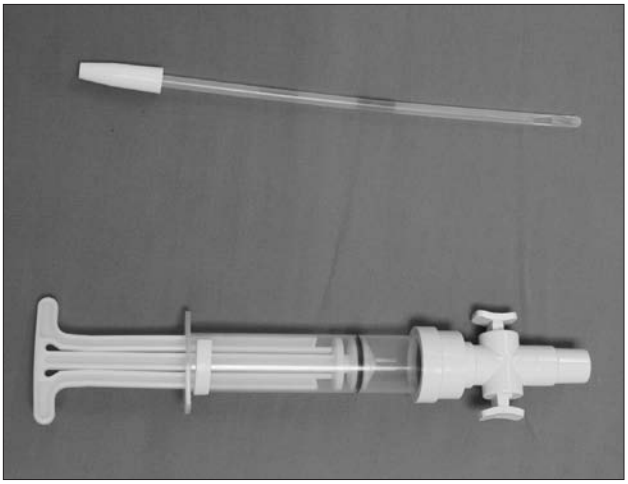

Fig. 1. Sized flexible curette and Ipas MVA Plus Aspirator.

PROCEDURE

1. With intravenous line in situ, the patient is positioned in the semilithotomy position with legs in stirrups or foot rests, similar to the position for a routine pelvic examination. Bimanual examination confirms uterine orientation.
2. Speculum insertion. This procedure can be performed using either an "aseptic, no touch" technique or a traditional sterile field. This article will describe the aseptic technique. It is not necessary to cleanse the perineum. After insertion of a sterile speculum and after vaginal swabs for STI testing have been taken, the cervix is cleansed with gauze soaked in antiseptic. Although gloves are used, the operator must avoid touching the patient or gloves with portions of the instruments that will enter the uterine cavity.
3. Paracervical block. The anterior lip of the cervix is grasped with a nontraumatic tenaculum. Using a buffered lidocaine solution, as listed in the equipment section, an intracervical block is performed. A total of 10–20 mL of solution is injected intracervically in 4 quadrants: at the 3, 5, 7 and 9 o'clock positions. This provides substantial anesthetic that requires little intravenous medication for the remainder of the procedure.
4. Intravenous sedation. Both fentanyl and midazolam are used intravenously. Usually 2–6 mg of lidazolam and 25–100 µg of fentanyl are needed. These are given in 2-mg and 25-µg aliquots, respectively. Propofol 5–10 mL can also be used if a second experienced physician is present to monitor sedation and airway.
5. Uterine sound and cervical dilation. After the intracervical block, the uterine sound is inserted gently until it reaches the dome of the uterus.

Fig. 2. Tray set-up for the dilatation and curettage procedure.

The depth of the sound helps guide the depth to which other instruments should be inserted for evacuation. The sound is a thin instrument and a recently pregnant uterus is particularly soft and prone to perforation. If the internal orifice (os) is difficult to find, there are "os finders," a simple plastic set of small instruments that are particularly efficient at finding and guiding the uterine sound or first dilator through the opening of the internal os (Fig. 3). Another option for a tortuous cervix is to grasp the posterior cervix or anterior and posterior cervix together to straighten the cervical canal and allow sound and dilation. If there is a difficult opening of the internal os, care must be taken at this stage to avoid creating a "false channel" within the cervical canal. Early postpartum patients will rarely need any cervical dilation.

Pratt dilators are then used to dilate the cervix. To facilitate the introduction of a sharp curette, a minimum of #7 dilator and size of curette needs to be inserted. During termination of pregnancy, the size of the dilator approximately matches the gestational age.

At this stage the operator can continue using a hand-held Ipas syringe or the standard Berkeley suction method. Both will be described.

A. Ipas syringe technique

An appropriately sized flexible suction curette is inserted until it reaches the dome of the uterus. With the Ipas syringe in the ready position, it is attached to the curette. Pinch the plastic buttons together at the front of the Ipas syringe to activate the suction. With one hand on the tenaculum and one hand maintaining the join between the Ipas syringe and the curette, move the curette and Ipas syringe in and out of the uterus while rotating clockwise 90 degrees and counterclockwise 90 degrees to allow the curette to adequately clear the entire uterine cavity. Substantial pressure is required to move the curette in and out of the uterus and results in a jerky movement as the flexible curette moves along the endometrial lining, particularly toward the end of the procedure. If suction is lost, the Ipas syringe is removed, the tissue evacuated from the syringe, the suction replaced in the Ipas syringe and the Ipas syringe reattached to the curette that has been left in situ. Many women experience increased cramping during the latter part of the procedure. A sharp curettage can be used to confirm complete removal of the uterine lining, followed by a second Ipas syringe, although this is not necessary. This technique is not an option for the early postpartum period (i.e., retained placenta D & C).

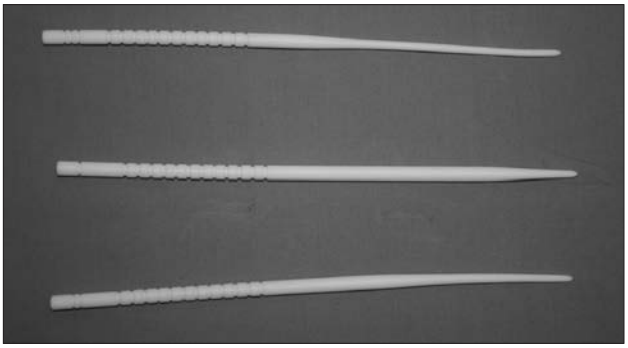

Fig. 3. Os finders.

B. Standard Berkeley suction technique

An appropriately sized rigid suction curette is inserted until it reaches the dome of the uterus. The suction tubing is attached and floor suction turned on. With a rotating motion, the curette is continuously turned 360 degrees in the uterus. An "in and out" motion is not required. To confirm complete evacuation of the uterus an "in and out" motion with the suction or sharp curette will produce the typical "sandpaper" feel as the curette scrapes the uterine lining.

COMPLETION AND POSTPROCEDURE

This is the same for both procedures. The suction curette and tenaculum are removed. A bimanual examination should confirm a small firm uterus. There should be very little bleeding. The speculum is removed and a nonsteroidal anti-inflammatory rectal suppository is inserted. Patient can then be moved to the recovery room. Patients should stay 1 hour in recovery before discharge home in the care of a responsible adult, and should abide by common postsedation guidelines with regard to driving.

Complete evacuation of the uterus is confirmed clinically by finding a small involuted uterus on bimanual examination and/or with postprocedure ultrasonography. Tissue can be examined grossly to ensure an adequate specimen and/or confirmation of gestational sac. This latter step is particularly helpful at sites where confirmation of ectopic pregnancy cannot be performed ultrasonically and the D & C at this point can confirm uterine gestational sac.

Postprocedure discharge instruction sheets should be given and reviewed with the patient. Patients should be followed up at 2 weeks postprocedure to evaluate for complications and to do a

review of curettage pathology. It is possible to become pregnant in the few weeks following D & C. It is recommended that sexual intercourse be avoided for 2 weeks postprocedure to reduce the risk of pregnancy as well as other complications.

RECOVERY

Patients can expect to return to work the day after a D & C. Ibuprofen and/or acetaminophen can be given for cramping and pain. Contraception, if needed, can be started on the day of surgery. Patients will experience bleeding and cramping for about 2 weeks after the procedure.

COMPLICATIONS

The overall complication rate is between 0.01% and 1.16% for immediate complications.[1]

Immediate complications

- Allergic reaction, acute asthma attack and vasovagal reaction.
- Bleeding, which is usually secondary to retained products or atonic uterus. The treatment is to ensure the uterus is completely empty, massage the uterus and give intravenous fluids, oxytocin 20–40 U in 1-L normal saline bolus and 10 U by intramuscular injection. Applying 5 minutes of continuous bimanual pressure may also help. Buccal misoprostol 300 mg can also be used for less severe but persistent bleeding.
- Pain. Ensure this is not secondary to increased bleeding or other more serious complications listed below. Treat with 30 mg ketorolac by intramuscular injection, and/or 25 µg intravenous fentanyl.
- Uterine perforation. This is more likely in a gravid uterus. It presents as the instrument passes through the uterus or extra uterine passage through the cervical canal. Patients may feel increased pain, vagal reaction, generalized peritonismus or diaphragm irritation (if the peritoneum is significantly disrupted). If perforation with suction curette occurs, peritoneum or abdominal contents may be seen in the suction tubing.
- Rare complications include air embolism, pulmonary embolism and cervical laceration with bleeding, unrecognized ectopic pregnancy and hematometra. Hematometra occurs when the uterus does not contract to pass all of the tissue, the cervical canal becomes blocked and, as a result, the uterus expands. Hematometra presents with significantly increased pain and nausea and is treated with repeat evacuation of the retained blood and clot.

Late complications

- Incomplete evacuation of the uterus. Usually tissue left behind is passed spontaneously; however, prolonged bleeding with retained tissue may require a repeat procedure.
- Infection/endometritis. This usually occurs with an untreated STI. However, bacterial vaginosis is also commonly associated with postprocedure endometritis. Perioperative antibiotics lessen, but do not eliminate, the risk of endometritis. Endometritis related to an STI usually presents 2–3 days after the procedure.
- Postprocedure depression. More than 2 weeks of mood-related symptoms should trigger health professionals to obtain an Edinburgh Postnatal Depression Scale symptom screen and assess for postpartum depression.
- Fertility. Having 2 or more D & C procedures can increase scar tissue and affect future fertility, and can increase the risk of ectopic pregnancy, miscarriage and placenta previa.

POST–D & C PATIENT INSTRUCTION SHEET

Patient instruction and complication sheets are available through the BC Health Guide (health linkbc.ca).

START-UP COSTS

All tray instruments together would cost less than $1000. The Ipas syringe is about $50. Many instruments can be taken from other procedural trays to minimize start-up costs. A Berkeley floor suction is a few thousand dollars; however, many larger hospitals are willing to donate older models of floor suction machines.

Competing interests: None declared.

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Country cardiograms case 34

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This article has been peer reviewed.

A 43-year-old man presents to the emergency department of a rural British Columbia hospital with a 3-hour history of chest pain. Soon after his arrival he develops ventricular fibrillation and is promptly defibrillated. His vital signs return to normal with a palpable radial pulse. An electrocardiogram is obtained (Fig. 1). What is your diagnosis?

For the answer, see page 126.

Competing interests: None declared.

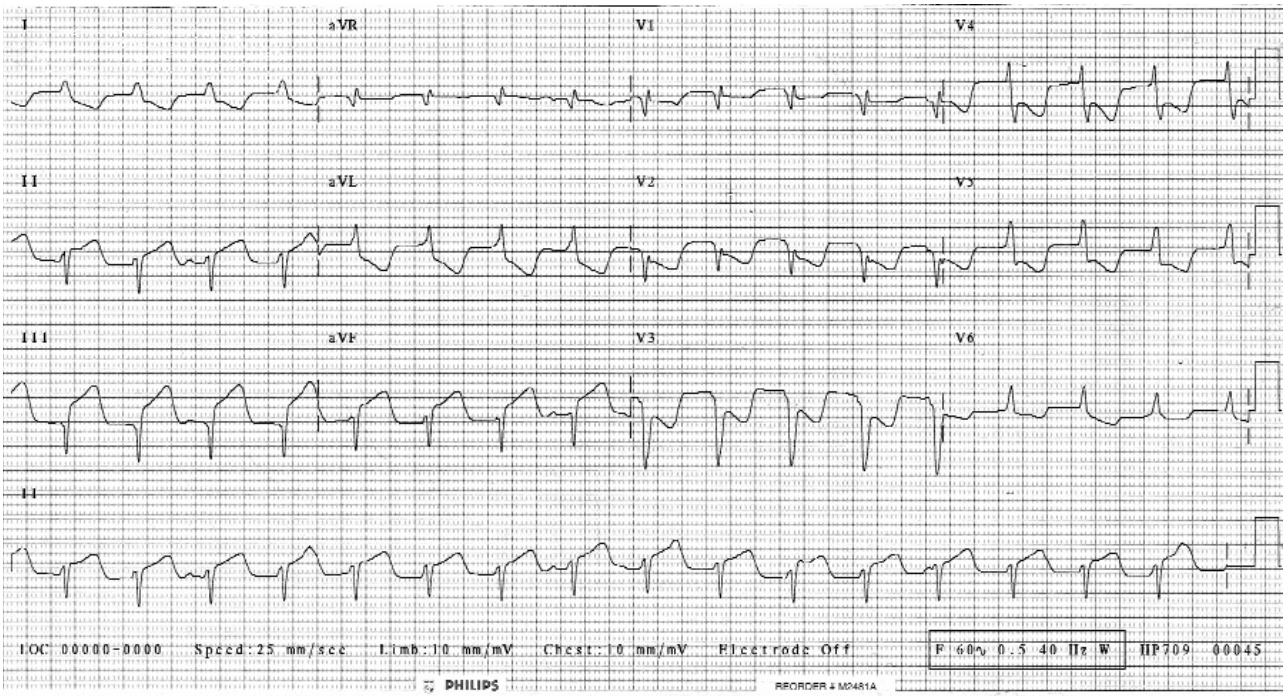

Fig. 1. Electrocardiogram of a 43-year-old man who presented to the emergency department with a 3-hour history of chest pain.

"Country cardiograms" is a regular feature of *CJRM*. We present an electrocardiogram and discuss the case in a rural context. Please submit cases to Suzanne Kingsmill, *CJRM*, P.O. Box 4, Station R, Toronto ON M4G 3Z3.

Podium: Doctors Speak Out
La parole aux médicins

Can international medical graduates help solve Canada's shortage of rural physicians?

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The shortage of health care professionals providing services to rural and remote regions has long been recognized as a significant problem in the delivery of Canadian health care. Rural Canada encompasses 99.8% of Canada's land mass and about 21% of the population, yet is served by only 16% of its general practitioners (GPs) and 2% of specialists.[1,2] In 1998, the average Canadian ratio of patients per GP was 896:1 in urban settings, compared with a ratio of 1214:1 in rural settings.[1] These shortages are exacerbated by challenges in the delivery of care across vast and remote distances, and are likely to intensify in the future, with a projected 33% decrease in the overall supply of Canadian physicians, due to physician attrition and lack of adequate replacement by recent graduates.[3,4]

Canada has historically relied on international medical graduates (IMGs) to augment its supply of physicians, particularly in rural areas. In the 1970s, 30%–35% of Canada's physicians were foreign-trained.[5] Estimates in 2007 indicate that 21.9% of physicians were trained outside of Canada or the United States, with the highest proportions in provinces with predominantly rural populations, including Saskatchewan (54.8%) and Newfoundland (41.7%).[6] A cross-sectional study of family physicians in southeastern Ontario found that IMGs, in comparison with medical graduates trained in Canada, were more likely to practise in small towns (32.9% v. 28.3%) or rural communities (20.0% v. 17.6%).[7] Similarly, a US study found that IMGs were more likely than US graduates to practise in medically underserved locations.[8]

Increasing opportunities for IMGs to practise in the Canadian health care system has been suggested as a potential solution to help mitigate Canada's shortage of rural physicians.[5,9] Important considerations include assessing the equivalency of medical training, ethics involved in recruiting physicians from developing countries, long-term retention rates of IMGs in rural communities and political barriers such as differing provincial licensing requirements, varying regional recruitment strategies and a lack of federal–provincial cooperation. This paper aims to address the following question: Will increased licensing of IMGs help solve Canada's rural physician shortage in a sustainable and ethical manner?

Obtaining a medical licence is a major barrier for IMGs wishing to practise medicine in Canada. Physician licensing falls under the jurisdiction of provincial regulatory authorities and there are wide variations across provinces with respect to access and granting of medical licences.[10] Requirements for a full licence are similar across provinces, contingent on successful completion of Licentiate of the Medical Council of Canada evaluating and qualifying examinations and Canadian postgraduate training. However, because of the limited availability of residency positions, many IMGs are unable to obtain full medical licences.[11]

A number of provinces have attempted to integrate IMGs into the provincial health care system by granting provisional (also known as "conditional," "restricted" or "temporary") medical licences. These enable IMGs to practise with restrictions until requirements for full licensure are completed, and are often coupled with rural contracts. Provinces with significant rural populations and problems with physician retention such as Newfoundland and Labrador, Saskatchewan and Manitoba have the greatest number of IMGs with provisional licences, and other provinces such as Quebec and Ontario grant few provisional licences.[11]

ASSESSING MEDICAL TRAINING

Assessing the equivalency of medical training for physician licensing has become more controversial in recent years because of increasing physician immigration from countries in which the quality of medical education is less well known. In the 1970s, 30% to 35% of Canada's physicians were foreign-trained, originating mainly from the United Kingdom, South Africa and Western Europe.[5] In 2002, 72% of IMG applicants for Canadian residency positions received their degrees from Asia, the Middle East or Eastern Europe, reflecting increased mobility of individuals from these countries, a shift in Canada's immigration policies and an increased number of foreign visa trainees from sponsoring countries.[12,13] Before 1993, "category 1" countries such as Britain, South Africa and New Zealand were allowed to bypass internship licensing requirements, based on medical education standards that were perceived to be equivalent, and "category 2" countries required an additional year of training.[14] In 1999, the BC Human Rights Commission ruled that the BC College of Physicians and Surgeons had discriminated against 5 IMGs, on the grounds that no individual should be prevented access to the training required for licensure based on the country of origin. The BC College Deputy Registrar responded by addressing the larger question of how to assess the quality of medical schools worldwide, expressing concern regarding "diploma mills" that produce graduates with little or no patient contact during their training.[14]

THE ETHICS OF USING IMGS

The recruitment of physicians from developing countries has also sparked additional ethical debate. This was illustrated vividly in 2001 when the South African High Commissioner to Canada criticized Canada for recruiting a relatively high number of South African physicians at a time when South Africa's own health care system was struggling.[15] Ethical dilemmas exist between an individual physician's right to self-determination and migration versus the rights of citizens of developing countries to have access to health care professionals in whose training they have invested.[15] Recommendations for national recruitment guidelines for health care professionals include countries from which recruiting would be unethical, a focus on passive instead of active recruiting, and the implementation of a national monitoring process.[15]

RETENTION ISSUES

The effectiveness of provisional licensing in generating long-term retention of IMGs in rural communities has not been clearly established. Evidence suggests that IMGs tend to migrate disproportionately to urban settings following completion of their mandatory rural terms, resulting in rapid physician turn-over and compromised continuity of care in rural settings.[8,11,16] Concern has also been expressed that IMGs may use rural placements as an expeditious route to full licensure, effectively using it as a screening mechanism for the rest of the country.[16–18] A retrospective cohort study[16] conducted in Newfoundland and Labrador between 1995 and 2006 found that the proportion of provisionally licensed IMGs remaining in the province dropped to 55% after 2 years, coinciding with the end of the standard rural contract term. After 5 years, only 20% of provisionally licensed IMGs remained in the province. Close to 90% of IMGS who migrated to other provinces moved to urban centres, particularly in Ontario, which is thought to be related to increased financial compensation as well as ethnic diversity. A similar study[17] found that both provisionally licensed IMGs and graduates of other Canadian medical schools remained in Newfoundland and Labrador for a significantly shorter period (median 24 mo) than local Memorial University graduates (median 40 mo), suggesting a benefit in recruiting local graduates. The overall retention rate after 8 years for all graduates in this study was 13.7%.

This highlights the importance of considering long-term IMG retention within the larger context of recruitment and retention of rural physicians. General barriers to the retention of rural physicians in Canada include the heavy workload, breadth of

skills required, professional isolation, preferences for urban lifestyles and career options, and a lack of interest in rural lifestyles.[4,18] A study of foreign-trained doctors in Australia[19] found that important predictors of rural retention were a supportive community environment, the potential to maintain cultural and religious ties, opportunities for spouses and children, and professional support mechanisms. Not surprisingly, discrimination and racism were inversely correlated with rural adaptation. Another study[20] found that Australian graduates and IMGs identified similar training, professional support and financial priorities, indicating a need to address the broader systemic determinants of physician distribution.

LIMITED COOPERATION AMONG JURISDICTIONS

Although all Canadian provinces and territories face similar issues and challenges related to rural physician shortages, there has been limited cooperation in attempting to solve common issues.[18] A lack of coordination between provincial medical licensing bodies and federal immigration authorities, as well as divergent regional recruitment and retention strategies, have resulted in inconsistent policies and a lack of cohesion at the national level.[18] This has likely contributed to increased interprovincial migration, exacerbating shortages in some of Canada's most underserved provinces.[16,17] Encouraging greater cooperation at the national level will be an important aspect of reducing rural inequities in the long term.

In conclusion, the problem of physician distribution in rural Canada is a complex and enduring issue that is unlikely to be solved exclusively through licensing more IMGs. International medical graduates clearly have an important role in alleviating acute shortages and providing temporary relief for Canada's overworked and overextended rural physician workforce. However, increased IMG licensing is unlikely to lead to long-term retention in rural communities without being part of a broader strategy to increase domestic rural physician supply and retention rates, a position supported by the Canadian Medical Association and Society of Rural Physicians of Canada.[21,22] More research will be needed to establish a national picture of rural IMG recruitment and retention rates, to gain a better appreciation of the overall contribution of IMGs to the delivery of rural Canadian health service and to identify factors that contribute to increased rates of IMG retention specific to the rural Canadian context. Additional factors that will need to be considered include the establishment of Canadian guidelines for ethical recruitment and methods of improving coordination between provincial licensing bodies, federal immigration authorities and regional recruitment and retention strategies at a national level.

Acknowledgement: This article is dedicated to my father who has spent his 35-year medical career serving rural Canada, and in whom I have seen first hand the tremendous commitment and personal sacrifice that rural practice entails.

Competing interests: None declared.

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Instructions for Authors

The *Canadian Journal of Rural Medicine (CJRM)* is a quarterly peer-reviewed journal available in print form and on the Internet. It is the first rural medical journal in the world indexed in Index Medicus, as well as MEDLINE/PubMed databases.

CJRM seeks to promote research into rural health issues, promote the health of rural and remote communities, support and inform rural practitioners, provide a forum for debate and discussion of rural medicine, provide practical clinical information to rural practitioners and influence rural health policy by publishing articles that inform decision-makers.

Material in the following categories will be considered for publication.

Original articles: research studies, case reports and literature reviews of rural medicine (3500 words or less)

Commentary: editorials, regional reviews and opinion pieces (1500 words or less)

Clinical articles: practical articles relevant to rural practice. llustrations and photos are encouraged (2000 words or less)

Off Call articles: a grab-bag of material of general interest to rural doctors (e.g., travel, musings on rural living, essays) (1500 words or less)

Cover: artwork with a rural theme

Manuscript submission

Submit 2 hard copies of the manuscript to the Editor, *Canadian Journal of Rural Medicine,* PO Box 4, Station R, Toronto, ON M4G 3Z3, and an electronic version, preferably by email to cjrm@cjrm.net, or on CD. The preferred electronic version is an older Word format (in doc format such as Word 2003 or older — not docx). Digital art and photos must accompany the manuscript in separate files (see "Electronic figures and illustrations").

Hard copies of the manuscript should be double-spaced, with a separate title page containing the authors names and titles and a word count, an abstract of no more than 200 words (for original articles category), followed by the text, full references and tables (each table on a separate page). Reference marks should be typed in the text and enclosed by brackets <1> and listed in the order of appearance at the end of the text and not prepared using electronic EndNotes or Footnotes. The approved style guide for the manuscript is the "Uniform requirements for manuscripts submitted to biomedical journals" (see www.cmaj.ca/authors/policies.shtml).

Include a covering letter from the corresponding author indicating that the piece has not been published or submitted for publication elsewhere and indicate the category in which the article should be considered. Please provide the name and contact information of a potential independent reviewer for your work.

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Out Behind the Barn
Dans le feu de l'action

Asklepios

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The Canadian Medical Association's (CMA's) new social networking website, called Asklepios, provides a free, secure network that Canadian physicians can use to send email to each other, discuss medical issues and find other physicians with similar hobbies or interests. This site could be very useful for rural physicians in small communities where there are a limited number of medical colleagues available.

GETTING STARTED

Asklepios is a free service for any physician who has registered to use the CMA's main website (cma.ca). A link is available on the CMA home page or you can go directly to www.asklepios.ca.

HOME PAGE

At the top of the page is a search window that allows you to quickly search for information anywhere on the website. The main menu has links to the major features described later in the article. The centre window displays recent site activity by other users. On the left side of the page are quick links to manage your personal profile, a list of users who are currently logged in and links to the CMA's online clinical resources.

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This link allows you to update the "user profile" that you create on your first visit. It describes you and your professional or personal interests. Options are available to upload a picture and to set limits on which users can view your profile.

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If you find another user with similar interests, you can ask them to become your "colleague" or "friend." After you make the request, a message is sent to the other user, who must agree to be accepted as your colleague.

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You can view the personal profiles of any users who have made their profiles public. Search options allow you to browse by city, province, specialty and other criteria. While viewing a user's profile, you will see options to add them to your colleague list, send them a secure email message, report them to the system administrator or block them from communicating with you.

INVITE

You can invite other physicians to join Asklepios by sending a message to their regular email address. Watch for occasional contests in which you can win a prize by inviting other physicians to join.

EVENTS

In this section you can create descriptions of events of interest to other physicians. You can include photographs, control who can view the event and specifically invite other users to attend.

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You can view and contribute to discussion groups created by other users. You

can even create a discussion group of your own. A useful discussion group to explore when you first join is the "Asklepios Users Group," in which users discuss their experiences using Asklepios.

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Here you can view messages sent by other users and review messages that you have recently sent. When first contacting another user, use the "send message" link on the user's personal profile page. An option is available to be notified at your regular email address when someone has sent you a message on the system.

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This section allows you to update your email address, display the correct time zone and control which of your site activities are displayed to other users. An option is available to completely delete your account from the system.

LOWER MENU

A menu at the bottom of every page provides additional useful links. The "Report an Issue" link displays a list of frequently asked questions. The "Feedback" link allows you to send comments or questions to the system administrator. Other links display the CMA privacy policy and the site's terms of service.

THE BOTTOM LINE

This site is a very useful way to communicate with your medical colleagues across Canada. If you visit the site after reading this article, please leave a message on my profile page to let me know.

Competing interests: None declared.

Cochrane Library — full text now available: www.thecochranelibrary.com; www.ccnc.cochrane.org

A pilot project of the Canadian Cochrane Network and Centre has made the full text of the Cochrane Library of evidence-based medical reviews available to all Canadians until Dec. 31, 2009. The reviews are available on the Cochrane Library website. No user name or password is required. For more information about the pilot project, visit the CCNC website.

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Include your full name and email address. If you include a short biography it will be posted to the list as your introduction. You can also access both the RuralMed archives and a RuralMed subscription form through the SRPC home page at: **www.srpc.ca**.

MedRurale

Pour vous abonner au serveur de liste francophone, MedRurale, veuillez envoyer un courriel à l'adresse suivante : **lamarche@comnet.ca**.

Donner votre nom au complet et votre adresse de courriel. Si vous ajoutez aussi une courte biographie, elle pourra être affichée sur la liste en guise de présentation. Vous pouvez aussi accéder aux archives de MedRurale et à un formulaire d'inscription au serveur de liste anglophone sur la page d'accueil du site de la SCMR, **www.srpc.ca**.

Country cardiograms case 34: Answer

Charles Helm, MD, CCFP
Tumbler Ridge, BC

After defibrillation it is gratifying to be able to note an electrocardiogram (ECG) with a regular rate of 100 beats/min. The ECG showed a QRS complex, 0.105 seconds in duration, and the rhythm (narrow complex, regular) looked like an accelerated junctional rhythm. Closer inspection of the rhythm strip revealed some deflections that look suspiciously like P waves (between QRS complexes #2 and #3, between #7 and #8, and just before #13). Measuring these out, they were indeed almost perfectly regular and represented dissociated P waves (Fig. 1 on page 119).

Once these dissociated P waves have been identified, one can look for and identify more such P waves, although they are harder to spot, as they are superimposed on the T waves or ST segments (as represented in Fig. 2, which shows the atrial rate is actually 60 beats/min). Once atrioventricular dissociation is thus demonstrated, it can be stated with certainty that the rhythm is not supraventricular in origin. The rhythm diagnosis is therefore as follows: accelerated junctional rhythm, rate 100 beats/min, with dissociated P waves, rate 60 beats/min. Such findings are not uncommon after defibrillation.

The most immediately obvious abnormality is the extreme degree of ST segment shift. There is significant ST segment elevation in leads II, III and aVF, with tall T waves, and there is significant ST segment depression in leads I, aVL and the precordial leads (especially V2–V5). A useful technique when confronted with these seemingly overwhelming changes is to start with the area of ST elevation. In this case the degree of inferior ST segment elevation suggests an inferior ST-elevation myocardial infarction (STEMI), and this is buttressed by the reciprocal changes of ST depression in leads I and aVL.

That leaves the anterior ST segment depression to explain. Many cases of inferior wall STEMI involve the posterior wall as well, which would show as ST segment elevation in posterior leads V8 and V9 on a 15-lead ECG. Reciprocal changes of ST segment depression would consequently be seen

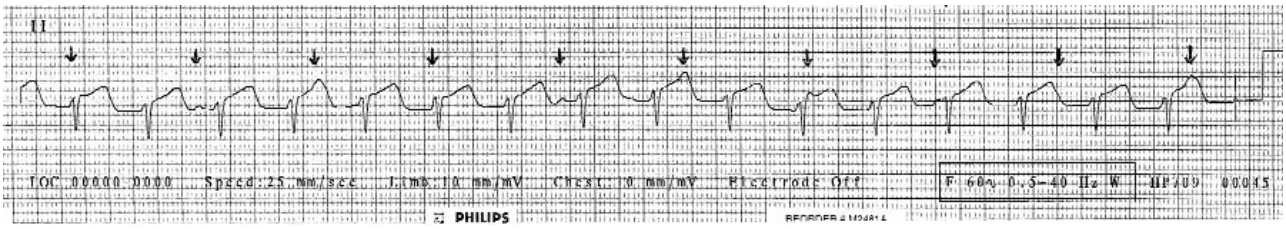

Fig. 2. Rhythm strip after defibrillation.

"Country cardiograms" is a regular feature of *CJRM*. We present an electrocardiogram and discuss the case in a rural context. Please submit cases to Suzanne Kingsmill, *CJRM*, P.O. Box 4, Station R, Toronto ON M4G 3Z3.

in the anterior leads, especially V1, V2 and V3. This is a more common pattern than the alternative possibility, which is of coincident anterior ischemia that has been unmasked by the hemodynamic changes associated with the inferior STEMI.

In this case the ST segment depression extends all the way to V5, and there are clearly abnormal Q waves in leads V1–V3, suggesting an anterior myocardial infarction of uncertain age. However, it remains a reasonable approach to interpret this ECG as showing an acute inferior STEMI pattern with possible posterior wall involvement.

When an inferior myocardial infarction ECG pattern is seen, a 15-lead ECG is advisable to look for a right ventricular infarction pattern in lead V4R. Management of right ventricular infarction has some specific requirements, including the need to avoid nitroglycerine, morphine and β blockers, and the possible need for fluid challenges.

This patient received standard care after defibrillation and for STEMI, with an eventual good outcome. **For the question, see page 119.**

Directives aux auteurs

Le *Journal canadien de la médecine rurale (JCMR)* est un trimestriel critiqué par les pairs disponible sur papier et sur Internet. Le *JCMR* est le premier journal de médecine rural au monde à être inscrit dans

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Le *JCMR* vise à promouvoir la recherche sur les questions de santé rurale, à promouvoir la santé des communautés rurales et éloignées, à appuyer et informer les praticiens en milieu rural, à offrir une tribune de débat et de discussion sur la médecine rurale, ainsi qu'à fournir de l'information clinique pratique aux praticiens en milieu rural et à agir sur la politique de santé rurale en publiant des articles qui éclairent les décideurs.

On étudiera la possibilité de publier des documents dans les catégories suivantes.

Articles originaux : études de recherche, rapports de cas et analyses critiques d'écrits en médecine rurale (3500 mots ou moins)

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Autres : documents d'intérêt général pour les médecins ruraux (p. ex., voyages, réflexions sur la vie rurale, dissertations). (1500 mots ou moins)

Couverture : œuvre d'art à thème rural

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