Canadian Journal of Rural Medicine

Journal canadien de la médecine rurale

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Le journal officiel de la Société de la médecine rurale du Canada

VOLUME 16, NO. 3, SUMMER 2011

VOLUME 16, Nº 3, ÉTÉ 2011

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SRPC annual awards

KEITH AWARD

Presented to the University of Sherbrooke

Criteria: This year's Keith Award looked at the largest number of graduates practising in rural areas 5 years after graduation. Family medicine residents were identified through the Canadian Post-MD Educational Registry. Practice location was taken from the Canadian Medical Association database 5 years later.

RURAL MEDICAL EDUCATION AWARD

Presented to the Northern Ontario School of Medicine

Criteria: Presented to an undergraduate medical program that has excelled in producing graduates headed for a career in rural medicine. This year we looked for the medical school program matching the most graduates to rural family medicine programs in the 2010 CaRMS match. The Northern Ontario School of Medicine excelled by a significant margin, with 72.41% of total graduates matching to a rural family medicine residency.

FELLOWSHIP AWARD

Martin Benfey — Fort Coulonge, Que.
Rochelle Dworkin — Hanover, Ont.
Robert Henderson — Campbellford, Ont.
Dave McLinden — Hunstville, Ont.
Bill Potvin — Carleton Place, Ont.
Allan Ranson — Hamiota, Man.
Paul Rutherford — Listowel, Ont.
John Van Dorp — Wiarton, Ont.

Criteria: The physician must have worked in rural and remote Canada for 10 years, be a member of the SRPC and have been a member for at least 5 years.

The physician must have received the Rural Service Award in a previous year, must be present at a CME-sponsored event where the certificate is being presented and must have a minimum of 10 SRPC-sponsored CME credits such as Rural & Remote, McGill emergency courses or Rural Critical Care. Each year of preceptoring for medical students or residents in a rural/remote community is counted as 1 credit. Each full year of involvement in an SRPC committee is counted as 1 credit.

RURAL SERVICE AWARD

Dr. Robert Algie — Fort Frances, Ont.
Dr. Peter Boronowski — Inuvik, NWT
Dr. Carolyn Brown — Bancroft, Ont.
Dr. Ben Chan — Toronto, Ont.
Dr. Essandoh Dankwa — St. Anthony, NL
Dr. Raymond Dawes — Barry's Bay, Ont.
Dr. Robert Drysdale — Golden, BC
Dr. R. Bruce Edington — Hanover, Ont.
Dr. G. William Fitzgerald — St. Anthony, NL
Dr. Robert Forsey — Happy Valley–Goose Bay, NL
Dr. Joanne Fry — Sioux Lookout, Ont.
Dr. Allan Garbutt — Bellevue, Alta.
Dr. Catherine Gudmundson — Ste. Rose du Lac, Man.
Dr. C. Stuart Johnston — Oliver, BC
Dr. Peter Kapusta — Saskatoon, Sask.
Dr. J. René Lafleche — Hearst, Ont.
Dr. Stephanie Langlois — Renfrew, Ont.
Dr. Trina Mathison — Dauphin, Man.
Dr. William McCready — Thunder Bay, Ont.
Dr. Ken Milne — Goderich, Ont.
Dr. Wade Mitchell — Collingwood, Ont.
Dr. Sarah Newbery — Marathon, Ont.
Dr. Mary O'Keefe - St. Anthony, NL
Dr. Eliseo Orrantia — Marathon, Ont.
Dr. Brian Power — Flesherton, Ont.
Dr. Dan Reilly — Fergus, Ont.
Dr. Ralph Suke — Southampton, Ont.
Dr. Michael Whittle — Princeton, BC
Dr. Anthony Wiens — Dauphin, Man.

Criteria: The physician must have worked in rural and remote Canada for 10 years and have been a member of the SRPC for at least 5 years.

RESIDENT ESSAY CONTEST

Elaine St. John

STUDENT ESSAY CONTEST

Lindsey Sutherland

Canadian Journal of Rural Medicine
Journal canadien de la médecine rurale

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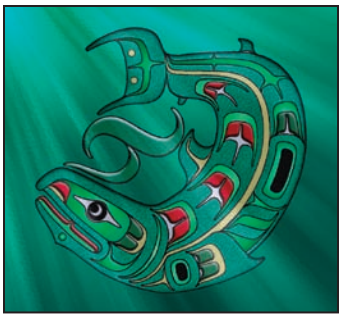

Coming Home
Sketched, scanned and finished in Photoshop, 16" × 20", by Harold Alfred, Victoria, BC
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http://haroldalfred.com
Returning home, guided by the shining light of our ancestors, as have countless generations before.

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Directrice et éditrice
Glenda Proctor

Associate Directors, Publications
Directeurs associés, Publications
Holly Bodger, Tim Howe

Managing Editor
Directrice de la rédation
Kate Brown
800 663-7336 x2114
kate.brown@cma.ca

Production
Kathryn A. Freamo
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Doctors Speak Out

Podium — Letters to the Editor — Editorials

We invite physicians to speak out on issues that concern them. Send your submissions to Suzanne Kingsmill, Managing Editor, *CJRM*, 45 Overlea Blvd., P.O. Box 22015, Toronto ON M4H 1N9; cjrm@cjrm.net

Les médecins s'expriment

La parole aux médecins — Lettres à la rédaction — Éditoriaux

Nous invitons les médecins à commenter les questions qui les intéressent. Faites parvenir vos textes à Suzanne Kingsmill, rédactrice administrative, *JCMR*, 45, boul. Overlea, C. P. 22015, Toronto (Ontario) M4H 1N9; cjrm@cjrm.net

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A bit of history

Peter Hutten-Czapski, MD
Scientific editor, CJRM
Haileybury, Ont.

Correspondence to:
Dr. Peter Hutten-Czapski;
phc@srpc.ca

Recently, at the Rural and Remote Medicine conference, a chance remark by a colleague led me to think it was time to write about how some of the elements of the SRPC came about. For example, RuralMed, the SRPC listserv that lets rural doctors from around the world discuss issues of relevance to them, wasn't always an institution. So I asked Dr. John Wootton, SRPC president and RuralMed's founder, about how this wonderful listserv, which now links more than 800 rural doctors in 12 countries, began.

John recounted,

> I was taking a break from the 1995 Rural and Remote Medicine conference being held in Montréal by the SRPC. I hiked up to the McGill Computer Store, hoping to look at the first Macintosh PowerBook (with a new associate professor card in my pocket, in case I wanted to buy something) and noticed on a corkboard an advertisement about an engineering faculty listserv.

John hadn't heard about listservs before. He read the advertisement's description of a method to join disparate individuals together, using a central server that would send emails to an entire list of subscribers. As the SRPC member-at-large for communications, John quickly realized that this was a tool rural doctors could use:

> I phoned the McGill computer department that was in charge of hosting the listservs, and set one up. The name RuralMed came off the top of my head. I walked back to the hotel and announced the listserv at the Annual General Meeting [of the SRPC], and that was it.

The RuralMed listserv had its first message on Mother's Day on May 11, 1995, at 8:29 pm. There were just 35 members on the list.

In subsequent years there were other listservs for rural physicians. A notable one, from The College of Family Physicians of Canada, was the Canadian Rural Medicine Network (CaRMeN), their listserv for rural doctors that made its debut in late 1996. Many joined that list as well, but it petered out because … well … it did not have as much appeal as RuralMed.

The fact that RuralMed continues on is not so much a tribute to the technology or the SRPC as it is to its membership. After all, it's the subscribers who provide the content. And where else will you find discussions about tractor repairs (and brag pictures of tractors — although we try to discourage attachments because some rural doctors are still on dial-up), how to deal with impaired drivers, moral reasons for breaching patient confidentiality, and the health effects of nuclear reactors and washing machines?

About the washing machine connection, well, don't ask me. You can ask RuralMed. To subscribe, send a message to admin@srpc.ca. Include your name and the words "Subscribe RuralMed" as the subject message.

Un peu d'histoire

Peter Hutten-Czapski, MD
Rédacteur scientifique, JCMR
Haileybury (Ont.)

Correspondance :
Dr Peter Hutten-Czapski;
phc@srpc.ca

Récemment, à l'occasion du Congrès annuel de la médecine en milieu rural et éloigné, une remarque fortuite d'un collègue m'a amené à penser qu'il était temps d'écrire un article sur la façon dont certains éléments de la Société de la médecine rurale du Canada (SMRC) ont vu le jour. Par exemple, RuralMed, le serveur de liste de diffusion de la SMRC qui permet aux médecins travaillant en milieu rural du monde entier de discuter de questions d'intérêt, n'a pas toujours existé. J'ai donc demandé au Dr John Wootton, président de la SMRC et fondateur de RuralMed, quelle est l'origine de ce merveilleux forum qui relie aujourd'hui plus de 800 médecins ruraux dans 12 pays.

Voici ce que John a raconté :

> Je prenais une pause au Congrès de la médecine en milieu rural et éloigné de 1995, qui avait lieu à Montréal cette année-là. Je me suis rendu à la boutique informatique de McGill, dans l'espoir de voir le premier PowerBook de Macintosh (avec ma nouvelle carte de professeur associé dans ma poche, au cas où…) et j'ai remarqué sur un babillard une publicité concernant un serveur de liste de diffusion pour la Faculté de génie.

John n'avait jamais entendu parler de serveurs de listes de diffusion avant. Il a lu la description de l'annonce, qui parlait d'un moyen de joindre des personnes situées dans divers endroits en utilisant un serveur central qui enverrait des courriels à une liste d'abonnés. En tant que membre à titre personnel de la SMRC pour les communications, John s'est vite aperçu qu'il s'agissait d'un outil que les médecins en milieu rural pourraient utiliser :

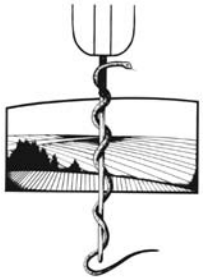
> J'ai téléphoné au service informatique de McGill responsable d'héberger les serveurs de listes et j'en ai créé un. Quant au nom RuralMed, il m'est venu comme ça. Je suis retourné à l'hôtel où j'ai annoncé la création du serveur de liste à l'assemblée générale annuelle [de la SMRC] et on connaît la suite.

RuralMed a transmis son premier message le jour de la fête des Mères, le 11 mai 1995, à 20 h 29. À l'époque, il n'y avait que 35 membres sur la liste.

Dans les années qui ont suivi, d'autres listes de diffusion pour les médecins ruraux ont vu le jour. Celle du Collège des médecins de famille du Canada, connue sous l'appellation CaRMeN (Canadian Rural Medicine Network) et créée vers la fin de 1996, est digne de mention. Nombreux sont ceux qui se sont inscrits à cette liste, mais elle s'est éteinte parce que ... euh ... elle n'avait pas autant d'attrait que RuralMed.

Le fait que RuralMed soit toujours en vie n'est pas tant un hommage à la technologie ou à la SMRC qu'à ses membres. Après tout, ce sont les abonnés qui l'alimentent. Et y a-t-il un autre endroit où pouvez-vous avoir des discussions sur les réparations de tracteurs (avec photos de tracteurs à l'appui — même si nous n'encourageons pas les pièces jointes, car certains médecins en milieu rural ont encore une connexion Internet téléphonique), la façon de composer avec les conducteurs aux facultés affaiblies, les raisons morales d'enfreindre la confidentialité des renseignements personnels, et les effets sur la santé des réacteurs nucléaires et des machines à laver ?

Ne me demandez pas ce que les machines à laver ont à voir dans tout ça ! Posez plutôt la question dans RuralMed. Pour vous abonner, envoyez un message à admin@srpc.ca. Précisez votre nom et les mots « Abonnement à RuralMed » dans l'objet du message.



President's message: old guard, new blood

John Wootton, MD
Shawville, Que.

Correspondence to: Dr. John Wootton; jwootton@srpc.ca

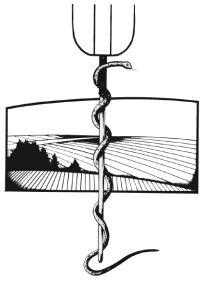
At the recent (and very successful) annual SRPC conference in Collingwood, Ont., I was struck by several things. First among them was the plethora of familiar faces; second, the plethora of unfamiliar ones. Both these experiences were positive, but in different ways and for different reasons.

The presence of the old familiar faces spoke to the strength of the bond that holds SRPC members together. There were many there who were present at the early conferences in Montréal, Que., and we were even treated to a history lesson that brought to life the truly grassroots origins of our organization. This history is important and deserves to be captured, distilled and preserved to inform our future directions.

Most responsible for the sea of faces that I did not immediately recognize were the students and residents who were present in great numbers, both at the workshops and the social events. Their presence is a challenge and an opportunity. Without having a rigorous survey on which to base my impressions, it seemed eminently clear that these students "get it." By this I mean that the model of the competent, full-service, community-oriented, rural physician that the SRPC promotes and supports is one that is understood and aspired to by these future physicians. The hope that rural medicine in Canada could become "something that someone would want to do" seems realized. The fact that so many students from diverse backgrounds and schools were present to attest to this fact makes me confident that the SRPC's message has been heard and absorbed.

The challenge, however, is in no way diminished by these facts. Many factors conspire to undermine this excellent foundation, not the least of which is the lack of a consistent, coordinated approach to turning this excellent beginning into the career choices that must follow to respond to the social responsibility to serve rural Canada. How to address the needs of rural Canada is a challenging question on many levels, whose details have been the subject of other essays in this space, but whose solution lies at least in part in the hands of those who must take up the challenges of rural practice. These students and residents who were present in Collingwood, and who will hopefully be present next year in at least as great numbers in Whistler, BC, must be challenged to forge a style of rural practice that addresses their needs as well as those of the communities that they must serve.

How this approach will be different from what the founders of the SRPC imagined is not yet clear, but different it must be. What will be the same, however, is the sense of adventure that rural practice affords, its sense of commitment and a humble acknowledgement of the great rewards that it provides. The SRPC will evolve, as it must, and it is my hope that it will do so with the active participation of new physicians who share its values. This conversation will continue in many places, will mature and will emerge re-energized. It must. It is that important.



Message du président : vieille garde et sang neuf

John Wootton, MD
Shawville (Qc)

Correspondance : Dr John Wootton; jwootton@srpc.ca

Au cours de la récente conférence annuelle très réussie de la SMRC à Collingwood (Ont.), plusieurs choses m'ont frappé. Tout d'abord, les nombreux visages bien connus et, deuxièmement, la multitude de visages inconnus. Les deux expériences se sont révélées positives, mais de façons différentes et pour des raisons différentes.

La présence des personnes bien connues témoignait de la force du lien qui unit les membres de la SMRC. De nombreux participants étaient présents dès les premières conférences à Montréal (Québec) et ont même entendu une leçon d'histoire qui a donné vie aux origines véritablement locales de notre organisation. Cette histoire est importante et elle mérite d'être retenue, examinée et conservée pour éclairer nos orientations futures.

Les nombreux étudiants et médecins résidents présents tant aux ateliers qu'aux activités sociales ont constitué le gros de la foule des personnes que je n'ai pas reconnues immédiatement. Leur présence pose un défi et elle ouvre des possibilités. Sans disposer d'un sondage rigoureux sur lequel fonder mes impressions, il m'a semblé tellement évident que ces étudiants ont « pigé » l'essentiel. Je veux dire par là que le modèle du médecin rural communautaire tous services et compétent dont la SMRC fait la promotion et qu'elle appuie est celui que comprennent ces futurs médecins et auquel ils aspirent. On espérait que la médecine rurale au Canada pourrait devenir « une discipline attrayante » et cet espoir semble se concrétiser. La présence de tant d'étudiants provenant de milieux scolaires et de contextes tellement diversifiés en témoigne, ce qui me porte à croire que le message de la SMRC a été entendu et compris.

Ces faits ne diminuent toutefois aucunement l'ampleur du défi. Beaucoup de facteurs se conjuguent pour miner cette assise excellente et dont le moindre n'est pas l'absence d'une approche uniforme et coordonnée permettant de transformer cet excellent début en éventuel choix de carrière pour répondre à l'obligation sociale de desservir le Canada rural. La façon de répondre aux besoins du Canada rural pose une question difficile à de nombreux égards. Elle a été explorée à l'occasion d'autres dissertations dans ces pages, mais la réponse repose, du moins en partie, entre les mains de ceux qui doivent relever les défis posés par la pratique en milieu rural. Il faut mettre ces étudiants et ces médecins résidents présents à Collingwood et qui, nous l'espérons, seront présents l'an prochain tout aussi nombreux à Whistler (C.-B.) au défi de créer un style de pratique rurale qui tiendra compte de leurs besoins et de ceux des communautés qu'ils et elles devront servir.

La différence qui existera entre cette approche et celle que les fondateurs de la SMRC avaient imaginée n'est pas encore claire, mais il y en aura assurément une. Ce qui ne changera pas, toutefois, ce sera certainement le sentiment d'aventure qu'offre la pratique en milieu rural, le sentiment d'engagement qu'elle a crée et la reconnaissance avec humilité des grandes récompenses qu'elle offre. La SMRC évoluera, comme elle doit le faire, et j'espère qu'elle le fera avec la participation active de nouveaux médecins ayant les mêmes valeurs. La conversation se poursuivra à de nombreux endroits, atteindra la maturité et en sortira redynamisée. Il le faut. C'est d'une importance capitale.

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Original Article
Article original

Hurry up and wait. The experiences of young women in rural Nova Scotia accessing specialized care

Jessie Harrold, MA
Lois A. Jackson, PhD
School of Health and Human Performance, Dalhousie University, Halifax, NS

Correspondence to:
Ms Jessie Harrold,
School of Health and Human Performance,
Dalhousie University,
6230 South St.,
Halifax NS B3H 3J5;
jessie_sheppard@hotmail.com

This article has been peer reviewed.

Introduction: This study explored experiences of waiting to access specialized health care among young women living in selected rural communities on the south shore of Nova Scotia. We asked women about the challenges they faced during wait times and how they perceived the impact of these experiences on their health.
Methods: We conducted qualitative interviews with 10 women aged 21–37 years. We used thematic analysis to identify common experiences among participants.
Results: Some women expressed feelings of frustration about waiting, but others resigned themselves to the wait. Women reported challenges such as caregiving for ailing family members who waited for care. Some women took control of their situation by accessing private health care or what they called "the next best thing" (e.g., care from alternative health providers), although in some cases this was financially costly. A few women sought assistance through support networks. Many women reported that wait times affected their health.
Conclusion: Our results support previous research indicating that young rural women's caregiving roles and support networks influence their experiences with wait times. Our research indicates that waiting to access specialized care can be financially costly for some women and may also affect their health.

Introduction : Cette étude a analysé les expériences vécues par de jeunes femmes vivant dans des communautés rurales choisies de la côte Sud de la Nouvelle-Écosse au chapitre de l'attente pour accéder à des soins de santé spécialisés. Nous avons interrogé les femmes au sujet des difficultés qu'elles ont rencontrées durant ces périodes d'attente et nous leur avons demandé comment elles en percevaient l'impact sur leur santé.
Méthodes : Nous avons réalisé des entrevues qualitatives auprès de 10 femmes âgées de 21 à 37 ans. Nous avons utilisé l'analyse thématique pour relever les expériences communes entre les participantes.
Résultats : Certaines femmes ont exprimé des sentiments de frustration vis-à-vis de l'attente, mais d'autres s'y sont résignées. Les femmes ont entre autre fait état de difficultés telles que prendre soin d'un proche malade en attente de services. Certaines ont pris le contrôle de leur situation en accédant à des soins de santé privés ou à ce qu'elles ont qualifié de « meilleure solution de rechange » (p. ex., soins dispensés par des professionnels des médecines douces), bien que dans certains cas, cela se soit révélé coûteux. Quelques femmes se sont tournées vers des réseaux de soutien. Nombreuses sont celles qui ont déclaré que les temps d'attente avaient nui à leur santé.
Conclusion : Nos résultats confirment les résultats de travaux antérieurs selon lesquels le rôle d'aidante des jeunes femmes des milieux ruraux et leurs réseaux de soutien influent sur leurs expériences face aux temps d'attente. Notre recherche indique que l'attente pour l'accès à des soins spécialisés peut se révéler coûteuse pour certaines femmes et qu'elle peut également affecter leur santé.

INTRODUCTION

Waiting to access specialized health care is an increasingly common experience for Canadians.[1] Owing in part to the complex needs for health care associated with high rates of chronic disease in the Canadian population, specialized health care services are subject to greater demand than the health care system is currently able to meet.[2] Patients referred to specialized health care providers, such as specialist physicians and psychologists, are often placed on waiting lists, and their priority status is based on need. The measure and reduction of wait times are currently key priorities for the Canadian government, yet waiting to access specialized care continues to be a reality for many Canadians.[1]

There exists a lack of research exploring patients' experiences of wait times and how waiting may affect their lives. Understanding these experiences is critical, especially because wait times may have a detrimental effect on the physical and emotional health of patients and families.[3] Among Canada's rural population, young women report particularly poor health outcomes, which may result in greater use of specialized health care services, thus adding to the imperative to understand their experiences with wait times.[4–6] Research indicates that young rural women may have unique experiences with wait times because they typically carry more of the burden of unpaid caregiving than rural men and often find themselves providing care for ailing family members while they await care.[7–11] Low socioeconomic status may add to the challenges associated with wait times if a woman is unwell and cannot afford to pay for child care and other support services.[12,13]

This research explores the experiences of young rural women as they waited for specialized care for themselves or a family member, strategies they developed to deal with waiting to access specialized health care and how they perceived the effects of their experiences on their physical and emotional health. Implications for programming, policy and practice are discussed.

METHODS

Recruitment and data collection

Eligible participants included English-speaking rural women aged 18–39 years who had accessed specialized health care for themselves or members of their families within the previous 12 months. We chose the 18–39 age range to explore a diversity of experiences among women who may be responsible for the care of young families as well as older parents, and who may be experiencing the demands of employment outside the home in addition to unpaid caregiving responsibilities.[9] For the purposes of this study, "rural" was defined as a region with a population of 10 000 or less.[14] Participants were recruited from several rural communities within the South Shore District Health Authority of Nova Scotia. This district serves about 60 000 residents and spans a distance of 100–150 km from Halifax, NS, where the nearest tertiary care hospital is located. We recruited participants using posters and newspaper advertisements, and by speaking to local health professionals and other key informants about the study and having them pass the information to potential participants. A purposeful sampling strategy using screening questions allowed us to ensure we collected data from a diverse sample of women who had different experiences with accessing specialized health care. This sample included women who accessed locally provided care and women who travelled to the nearest tertiary care centre, as well as women who accessed care for themselves and women who helped a family member access care.

Before recruitment of participants, this study was approved by the Dalhousie University Research Ethics Board.

Data were collected using a semistructured interview guide. The questions for the interview guide were developed based on an extensive literature review of young rural women's access to health care. The interview guide was pretested with 2 young women who had experiences with accessing specialized health care from a rural area. All interviews were face-to-face. Interview questions were designed to ask women to describe their experiences with accessing specialized health care, including some of the challenges they faced, support services they relied on to help them access care and how they perceived the effects of these experiences on their health. Interviews were about 1–1.5 hours in duration and were audiotaped with participants' consent. In addition, participants completed a brief sociodemographic survey. This survey included questions about participants' age, marital status, whether they had children, employment status and approximate annual household income.

Data analysis

The interview audiotapes were transcribed verbatim by either the first author (J.H.) or by an experi-

enced transcriber. Information that could identify a participant was not transcribed. All transcripts were uploaded into the ATLAS.ti program, which is a qualitative data management software package. The grounded theory approach to qualitative research shaped our analysis of the data. Using this approach, we read interview transcripts several times, developing familiarity with the data and looking for key concepts that were similar across the interviews.[15] These concepts formed a coding structure, or a set of concepts or themes, that described the data. For example, one concept in our coding structure was caregiving. Each interview transcript was read for sections in which the respondent spoke about caregiving, and this section was coded as "caregiving." Once all the interviews were coded, each code was reviewed for common and contrasting themes among and across participants. This process of constant comparison of themes was conducted within each of the codes and across all codes until no new themes were identified. Themes were then organized into higher-level conceptual ordering (e.g., experiences of waiting). A summary of preliminary findings was distributed to participants, who were then contacted by telephone so that they could provide feedback. Eight of the 10 participants were contacted, and all agreed with the preliminary findings, with few suggestions for changes. Two participants could not be reached.

RESULTS

Ten women aged 21–37 years participated in the study. Five of the women had a partner and 8 had children. Eight of the participants were unemployed or had part-time or casual employment, and 2 were employed full-time. Six of the 10 women's incomes were below the poverty line for their associated demographic (e.g., single individual, married couple with 2 children).[16] Ten interview audiotapes were recorded and transcribed, 7 by the lead author and 3 by an experienced transcriber.

Experiences of waiting to access specialized care

Why do we wait?

Several women's descriptions of their experiences with wait times began with their questioning why they had to wait to access specialized health care and positing answers to this question. Some participants attributed wait times to the lack of specialized health care services in the region. One participant talked specifically about the lack of local mental health personnel, saying that she believed this shortage was the reason her son waited to see a psychologist: "They're short-staffed … one more body would take the weight off of the people that are there … I'm not sure why … they can't get one more therapist down here."

Another participant suggested that limited access to local operating rooms was the reason her mother waited to access a specialist. "With Mom's [specialized physician], he only gets the OR for 2 days a month … you can only have the operating room so many days a month and the people … go down the [wait] list."

From frustration to resignation

When describing their experiences with waiting to access specialized health care, many women spoke of themselves as mired in frustration and feelings of helplessness. For example, one participant spoke about several attempts to access a local detoxification program. The health care system could not meet her immediate health needs, and she noted, "It was a very, very frustrating process because I really needed to go the first time [I attempted to access the program] and I ended up relapsing again … I mean, you feel so rejected."

Some women described their experiences of waiting in terms of feelings of resignation. One woman, who helped both her daughter and her mother access a variety of specialized health care services, said, "There's a lot of hurry up and wait … 'cause you have no choice … there's nothing you can do but wait."

Waiting and the challenges of caregiving

Many of the women spoke of unpaid caregiving as a key aspect of their day-to-day lives. They described how these responsibilities became increasingly burdensome when they were faced with caring for a family member whose health declined as they waited to access specialized health care. One woman talked about her role as caregiver for her family while she waited for specialized health care for her son.

> I mean, first you're a mom … you're the supporter, you're the one that's pattin' their back because they're nervous about something, you're the one that's giving them encouragement because something's good. [But when] you have to wait … it's pretty much upheaval in your family. That forces you [to] grin and bear it and hopefully your family doesn't break apart. When your child's in a situation like that you want them seen as soon as they can.

Women's strategies for dealing with wait times

A number of strategies were discussed by participants as being critical to helping them during wait times. Some sought private health care while they waited. Others accessed what they called "the next best thing," and yet others sought assistance through social support and information networks.

Seeking private health care

Some health care in Canada, such as services provided by psychologists, is available privately as well as publicly. Several participants spoke of paying out-of-pocket for private health care that could be accessed more rapidly than public health care services. One participant described how she could not wait to access a local psychologist for her son and talked about seeking a private psychologist so that she could access care more quickly. "The first appointment that [publicly funded mental health services] were willing to give us was [6 months away] … we ended up seeking out private services because it's just too long of a wait."

Accessing "the next best thing"

Many women dealt with the challenge of waiting by accessing something one participant called "the next best thing." This refers to local health care resources that are more readily available and accessible than specialized health care services, and included primary health care providers, such as nurse practitioners, as well as alternative health care providers, such as homeopaths. None of the women reported seeing their family physicians as "the next best thing" — many had challenges with either not having a family physician at all or having to wait to get an appointment. Women perceived accessing "the next best thing" as being very helpful for alleviating some symptoms while they waited to access specialized care. One woman commented, "In between [specialist appointments] [Mother] goes once every 2 weeks to a homeopathic doctor to get some needles in her knee so that she can walk."

Some of the services women described as "the next best thing" were freely available, such as local self-help groups. In contrast, alternative health care, which is not publicly funded in Canada, was often only accessible to women who were able to pay out-of-pocket, or to those who had additional health insurance coverage (either individually purchased or paid for by an employer). The woman whose mother accessed a homeopathic doctor said,

> The homeopathic doctor is covered by insurance … [but] I don't have the insurance that [Mother] has, so I couldn't go, or if [my daughter] needed that. We couldn't get that because I don't have the insurance to pay for that.

Seeking social support and information

Many participants actively sought social support services and information that helped them cope with waiting to access specialized health care or actually helped them shorten the wait time. Two women, for example, relied on support from friends and family to help with child care while they provided care to another family member waiting for specialized treatment. Another participant talked about information her mother received from a community member that enabled her to locate a specialist physician with a shorter wait list than the specialist to whom she had initially been referred. This information was obtained "through the grapevine" and led to her shortening the originally scheduled wait time. "Somebody knew somebody who knew somebody who'd been to the new doctor in the city, so [Mother] went back to the family doctor and said I wanna go see this [new doctor]."

Perceptions of impact on health

Women spoke of the impact they believed wait times had on their physical and emotional health, as well as the health of family members who were waiting for care. One participant noted that her mother's physical health condition worsened during the wait period. "[Mother's health problem lasted] for 2 years before they caught it … and it was another 6 months before she got into the specialist. The wait times sometimes make it worse while you're waiting."

Another participant described the physical and emotional effects she experienced while waiting for specialized care for her son.

> You're waiting to see people, you don't know what outcomes are … it's stress and anxiety more than anything. And then that'll lead to other things … you start to not sleep as well and you don't eat the same way. I think generally, for me, that's my experience is the waiting isn't good.

DISCUSSION

Our research findings build on previous studies exploring young rural women's experiences with accessing specialized health care. The physical and emotional impact of wait times have been described

in previous research, and our study confirms these findings.[3,7,17,18] Existing research also indicates that young rural women may have strong social support and information networks, and our findings suggest that in the context of waiting for specialized care, these networks are very helpful.[19–23]

Many participants believed that wait times are a product of the lack of providers of specialized care in the region or the lack of infrastructure (e.g., limited time in the operating room for physicians). A number of women experienced feelings of frustration with waiting to access specialized health care, but other women were resigned to having to wait for care. The demands of caregiving during wait times were challenging for many. Wait times were reported to have some negative impact on the physical and emotional health of participants and their families.

A unique finding of our research is that at least some women take control over their experiences with wait times by accessing private health care or "the next best thing," even though this can be financially costly. Accessing "the next best thing" includes providers of alternative health care whose services are not funded by the Canadian health care system. For women who have coverage for private health care, accessing care from providers of private or alternative health care may not add a financial burden, but for women without such coverage or a substantial household income, this strategy is either out of their financial reach or means financial sacrifice. Although we do not know how many people in rural places are unable to access alternative or private health care because of the cost, research suggests that low socioeconomic status is common among young rural women and that paying for such health care may be challenging or impossible for many in this situation.[12,13]

Policies that would ensure more comprehensive coverage for health care and thus provide access to many health professionals who are currently working within the private sector may help to relieve some of the pressures on Canada's overburdened health care system. For example, increased coverage for private psychologists may reduce the patient load of publicly funded psychologists and reduce their wait times. More comprehensive coverage would increase costs to the health system in the short term, but, by increasing access to care, such coverage may reduce long-term costs associated with worsening health in patients who await care. As this research has shown, waiting for access to specialized health care can exacerbate the physical and emotional health problems of patients and their families, and even create new health concerns.

Help for women as they take control over wait times may also reduce the burden on the health care system. Such assistance may include wider access to social support and information networks, such as family resource centres or Web-based support programs.[11,24–27]

Limitations

This research was an exploratory study that aimed to collect data from a relatively small group of participants. As a result, there are limitations associated with the lack of diversity among the participants. For example, one limitation of this research is that all of the women were of similar ethno-racial backgrounds. A more diverse group of women may have different experiences with waiting to access specialized health care, and future research needs to focus on their experiences of waiting for access to specialized care. Another limitation of our research is that it took place in one rural geographic area, the south shore of Nova Scotia. The experiences of rural women may differ considerably depending on the particular place, given that access to specialized care may vary widely across rural areas. Social support and information networks may also be very different depending on the place.

CONCLUSION

The reduction of wait times for specialized health care is currently a key priority for Canadian policymakers.[1] However, given that wait times are a reality within the Canadian context, it is critical that we address the challenges faced by patients and their families, especially because waiting can have implications for their health. For many young women living in rural areas, low socioeconomic status has a big impact on their health, and wait times may further affect their precarious incomes if they have to pay out-of-pocket for access to support services while they wait. It is imperative therefore that we mitigate the challenges that wait times present.

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An evaluation of the Acute Critical Events Simulation (ACES) course for family medicine residents

Timothy G. Willett, MD
Office of Professional Affairs, Royal College of Physicians and Surgeons of Canada, Ottawa, Ont.

Michael Kirlew, MD CCFP
Department of Family Medicine, University of Ottawa, Ottawa, Ont.

Pierre Cardinal, MD MScEpi, FRCPC
Royal College of Physicians and Surgeons of Canada, and Division of Critical Care Medicine, University of Ottawa, Ottawa, Ont.

Philip Karas, MD, CCFP
Department of Family Medicine, University of Ottawa, Ottawa, Ont.

Correspondence to:
Dr. Tim Willett, Office of Professional Affairs, Royal College of Physicians and Surgeons of Canada, 774 Echo Dr., Ottawa ON K1S 5N8; twillett@rcpsc.edu

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Introduction: A 2-year residency must prepare family physicians to provide a broad range of services. In many settings, especially rural and remote practices, family physicians provide emergency and inpatient care and thus encounter critically ill patients. Evidence of the importance of early recognition and aggressive intervention in critical illness is growing. However, opportunities to safely practise critical care skills during residencies are limited.
Methods: The 2-day Acute Critical Events Simulation (ACES) course was offered to all family medicine residents at the University of Ottawa in 2009. The course included lectures, case discussions, hands-on task training and a half-day of high-fidelity simulation. Its aims were to enhance the abilities of residents in family medicine to recognize signs of critical illness, to teach competencies in the early resuscitation and care of such patients, and to increase residents' confidence to include inpatient and emergency care in their practices, or to practise in a rural or remote setting. A postcourse questionnaire, which included Likert-scale and open-ended questions, was distributed to all participants.
Results: Thirty-seven participants completed the survey. The ACES course was exceptionally well-received by participants, who reported increases in confidence and perceived competence, as well as intentions to change practice. The course appeared to increase participants' confidence to work in rural or remote areas and include inpatient or emergency medicine services in their practices.
Conclusion: The ACES course achieved its aims, and participants reported positive outcomes. This highly interactive, simulation-based program may help prepare residents for work in rural or remote communities with critically ill patients.

Introduction : Une résidence de deux ans doit préparer les médecins de famille à fournir un large éventail de services. Dans de nombreux contextes, en particulier dans les régions rurales et éloignées, les médecins de famille fournissent des soins d'urgence et des soins aux patients hospitalisés. Ils sont donc en contact avec des patients gravement malades. L'importance du dépistage précoce et du recours à des interventions énergiques en cas de maladies graves est de plus en plus évidente. Or, les possibilités de pratiquer en toute sécurité des techniques de soins critiques en résidence sont limitées.
Méthodes : On a offert à tous les résidents en médecine familiale à l'Université d'Ottawa en 2009 un cours de deux jours sur la simulation d'événements critiques en phase aiguë. Il comprenait une partie magistrale, des discussions de cas, une formation pratique et une demi-journée de simulation de haute fidélité. Les objectifs étaient de renforcer les capacités des résidents en médecine familiale à reconnaître les signes d'une maladie grave, de leur enseigner des compétences en réanimation précoce et prise en charge de ces patients, et d'accroître leur confiance en eux pour qu'ils puissent inclure dans leur pratique les soins aux patients hospitalisés et les soins d'urgence, en milieu rural ou éloigné. On a distribué un questionnaire à tous les participants après le cours. Il comportait des questions ouvertes et des questions cotées selon l'échelle de Likert.

Résultats : Trente-sept participants ont répondu au sondage. Le cours a été exceptionnellement bien accueilli par les participants, qui ont déclaré se sentir plus sûrs d'eux et plus compétents, et avoir l'intention de modifier leur pratique. Le cours semble avoir rendu les participants plus confiants pour le travail en région rurale ou éloignée et disposés à inclure des services de soins aux patients hospitalisés ou des services d'urgence dans leurs pratiques.
Conclusion : Le cours a atteint ses objectifs et, selon les participants, a donné des résultats positifs. Ce programme par simulation et très interactif peut aider à préparer les résidents à traiter des patients gravement malades dans les collectivités rurales ou éloignées.

INTRODUCTION

There exists a knowledge gap in most acute care settings. Typically, residents and family physicians are called on to provide initial assessment and management of critically ill patients, especially in rural or remote clinical settings.[1] In an effort to better equip residents, the Department of Family Medicine at the University of Ottawa partnered with CRI [Canadian Resuscitation Institute] Critical Care Education Network (now a unit of the Office of Professional Affairs, The Royal College of Physicians and Surgeons of Canada) to deliver the Acute Critical Events Simulation (ACES) course. The course was designed to teach the basic competencies required to deal with critically ill patients in any setting. The course meets an important recommendation of a 2003 discussion paper by The College of Family Physicians of Canada (CFPC)[2] that states the following:

> The CFPC's accreditation standards should require all family medicine programs to provide family medicine residents with the opportunity to acquire the acute care skills needed for both rural and urban inpatient hospital care.

The discussion paper also suggests that the reluctance of family physicians to practise inpatient medicine may be owing to "a lack of self confidence in their professional abilities."

The goals of the course were to provide residents with the knowledge and skills to recognize the early signs and symptoms of critical illness; the competence necessary to deliver appropriate care in the early hours of critical illness, making optimal use of whatever resources may be available in their practice setting; and confidence in their ability to care for critically ill patients by meeting the above objectives. This, in turn, may have secondary benefits, such as improved recruitment, retention and overall professional satisfaction.

METHODS

Program

To the best of our knowledge, this is the only simulation-based course in Canada delivered to family medicine residents to be mandated by their department. Before delivery of the course, a brief focus group was held with representative residents in family medicine. Perceived needs with respect to education in critical care were discussed. Based on the results of the focus group and direction from M.K., an active educator in family medicine who works both with urban inpatients and in remote communities, the ACES course was modified in content and context to optimize relevance to residents in family medicine.

Four 2-day ACES courses, with up to 16 participants each, were delivered to residents during April and May 2009. CRI Critical Care Education Network assumed responsibility for course coordination, logistics and delivery. The department assisted the process by facilitating communication with the residents and arranging for time off from clinical placements.

The learning outcomes of the ACES course are to enable participants to understand the principles of effective crisis resource management, including leadership, communication, situational awareness, problem-solving and use of resources; recognize a critically ill patient by performing an initial assessment, initiate effective life-saving strategies for management and establish priorities for management in a patient with conflicting medical conditions; and assess and manage airway compromise, respiratory failure and shock.

Each course included the following modules:

- introduction to crisis resource management (lecture with video-based discussions);
- airway, breathing and circulation modules (all include a lecture, case discussions and hands-on training with equipment and manikins);

- neurologic and dysrhythmia modules (shorter modules including a lecture and case discussions);
- simulation (small-group sessions — maximum 4 participants — for 3.5 hours in team simulations with a computer-controlled lifelike manikin, dynamic vital signs monitor and real medical equipment, with video-based debriefing and feedback after each scenario).[3]

Participants received the course textbook in advance. The lecture on crisis resource management was the first module delivered. Participants were divided into streams and completed the other modules in variable order.

Instructors of these courses included 1 family physician, 5 critical care specialists and 3 critical care fellows. Teaching assistance was provided by critical care nurses and respiratory therapists from The Ottawa Hospital. The nurses were actors in the simulation scenarios, and the respiratory therapists helped to teach set-up of ventilators and troubleshooting.

Evaluation

These courses represent the first delivery of ACES to residents in family medicine. Postcourse questionnaires were distributed to all participants. Residents who did not attend both days of the course were excluded from the study. Questionnaires were delivered electronically, and 3 reminders were sent after the course. The survey included both Likert-scale (5-point) and open-ended questions.

We used quantitative methods to analyze the Likert-scale data, treating the responses as scale data. Means and 95% confidence intervals were reported. Intergroup comparisons of Likert-scale data were done using independent-sample t tests and one-way analysis of variance, with significance set at $p < 0.05$. Comparisons of categorical data were performed using χ^2 tests, again with significance set at $p < 0.05$. For comparisons of groups based on anticipated practice location, participants were classified as having a preference for "tertiary/suburban," "rural/remote" or "both." Statistics were calculated using SPSS version 15.

Qualitative data were reviewed and coded by one of us (T.G.W.) using a thematic analysis, in which themes were progressively defined and modified (with data recategorized as necessary) as information was analyzed.

Table 1. Demographics of respondents and their anticipated practices (n = 37)

Survey question	Response	% of respondents
Sex*	Male	22
	Female	76
	No response	3
Anticipated practice setting(s)†	Tertiary or large urban	35
	Small urban or suburban	62
	Rural	70
	Remote	24
Intent to include in practice†	Inpatient care	51
	Emergency care	70
	Neither	16

*Total does not equal 100% because of rounding.
†Participants were permitted to select more than 1 response.

RESULTS

The ACES courses were delivered to 49 second-year residents in family medicine. Responses to questionnaires were received from 37 participants, resulting in a response rate of 76%. Table 1 summarizes respondents' sex, anticipated practice location(s) and intent to include inpatient or emergency work in their practices. In this cohort, men were more likely to practise in tertiary or suburban settings, and women were more likely to practise in rural or remote settings (Table 2; $p = 0.006$). However, there was no association between sex and the choice to include inpatient or emergency care in one's practice.

The postcourse questionnaires contained 4 items addressing the level of complexity of the course (Fig. 1), 12 items related to the curriculum, content and outcomes of the course (Fig. 2), and 14 items related to the teaching and learning methods used (Fig. 3).

All course modules (including simulation) were rated as appropriate or close to it, with airway and circulation rated as slightly too basic.

With respect to course content and outcomes, all participants agreed (78% strongly so) that the course was relevant to their anticipated job-related needs. Sixty-one percent disagreed with the statement, "There were not enough opportunities for me to solve patient cases." Participants intending to

Table 2. Association between respondents' sex and anticipated practice setting (n = 36*)

	No. of respondents	
Practice setting	Male	Female
Tertiary or suburban	6	5
Rural or remote	2	13
Both	0	10

*One respondent did not indicate their sex.

work in tertiary or suburban centres were less likely to disagree. Seventy-nine percent agreed (41% strongly so) their technical skills improved because of the course. All participants agreed (68% strongly so) the course increased their confidence to manage the treatment of critically ill patients. Participants believed their competence improved with respect to breathing problems (97%), circulation (95%) and airway problems (92%). Female participants were more likely to strongly agree that their competence in airway and breathing problems had improved. Ninety percent indicated they planned to change practice because of the course. Finally, 97% agreed (83% strongly so) they would recommend this course to their colleagues and future residents in family medicine.

With respect to educational methods, 70% found the book to be useful preparation for the course; participants who intended to practise in rural or remote areas and who intended to include emergency or inpatient care in their practices were more likely to agree. All respondents agreed the slides were clear and easy to follow and the presentations enhanced their learning. All respondents agreed the case studies were a useful learning tool, and 76% indicated there was enough time for discussion and feedback. Those who intended to practise in rural or remote areas were more likely to strongly agree. Eighty-six percent agreed the use of the technical skills models improved their abilities. Ninety-two percent agreed there was enough time with the models; those who intended to include emergency or inpatient care in their practices were more likely to agree. Eighty-nine percent indicated the simulator recreated life-like crises, and 94% agreed the simulations reinforced the concepts taught in the course modules. Ninety-seven percent felt they gained skills in crisis resource management from the simulator, and 97% agreed they received useful feedback after the simulations. Only 6% found the simulations too stressful, and 95% indicated the simulations increased their confidence to manage critical situations.

Participants were asked 5 open-ended questions. Four questions were for purposes of quality improvement, addressing content or materials that could be altered or added. Eighteen respondents indicated they would like more simulations. The only prevalent theme for content to remove was, "nothing."

One question investigated whether the course had an impact on participants' confidence and attitudes toward rural practice. Nineteen respondents (51%) commented that the course increased their confidence to care for critically ill patients; 8 (22%) indicated it increased their confidence to work in a rural location; and 4 (11%) indicated it increased their comfort to include inpatient or emergency care in their practices. For example, one respondent wrote that the course "greatly increased my confidence to work in rural or remote areas with fewer resources." Another indicated, "Yes, I do feel more confident to work in emergency because I feel that in worst-case scenarios I have some tools at my disposal." Only 5 respondents (14%) indicated the course had little impact on their confidence or attitude; 4 of these respondents stated it was because they already worked or planned to work in rural areas or in the emergency department.

DISCUSSION

Skills in resuscitation are an important component of medical practice in rural and remote areas, where family physicians are responsible for the recognition and initial stabilization of critically ill patients.[4] Previous studies of training in advanced cardiac life support (ACLS) in rural communities have demonstrated improvements in patient care and outcomes.[5,6] Complementary to ACLS, the ACES

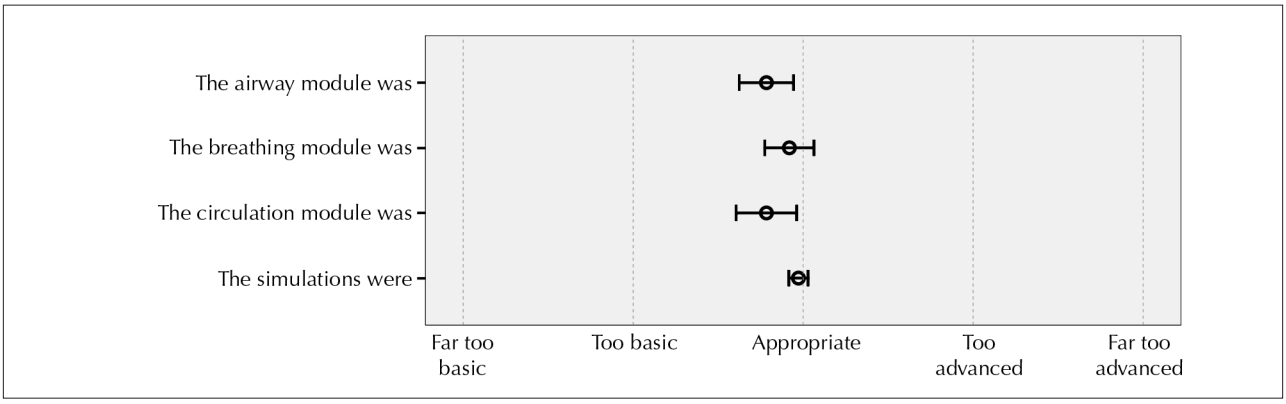

Fig. 1. Mean responses regarding participants' perceptions of the level of complexity of the course. Error bars represent the 95% confidence interval.

course aims to enable practitioners to provide resuscitation for the undifferentiated pre-arrest critically ill patient. This questionnaire-based ACES evaluation targeted levels 1 (satisfaction) and 3 (competence, confidence, intent to change practice) of Kirkpatrick and Kirkpatrick's model of program evaluation,[7] with information based on participant perceptions. The 76% response rate is acceptable for analysis.

Overall, the ACES course was very well-received by the participants. Likert-scale scores were exceptionally positive, which suggests the course is particularly appreciated by family physicians at this stage of their training. All respondents agreed the course was relevant to their anticipated job-related needs, and 97% would recommend the course to future residents.

Among course participants, some intended to practise in a rural or remote setting (largest group), some in a tertiary or suburban setting and some in both. Interestingly, female participants were more inclined to practise in rural or remote settings, although the current trend appears to be that about equal numbers of men and women enter rural practice.[8]

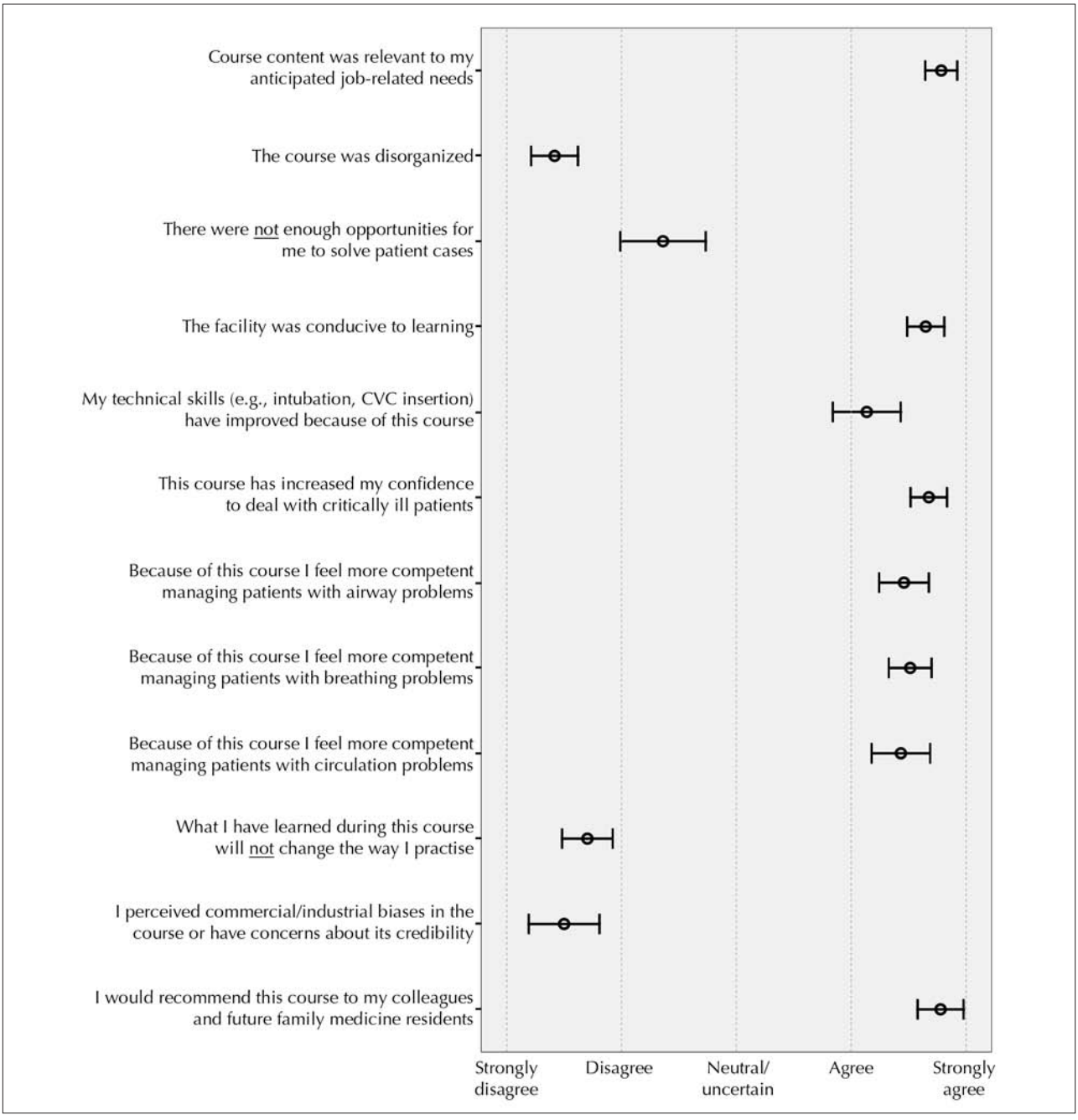

Fig. 2. Mean responses to Likert-scale items related to curriculum, content and outcomes. Error bars represent the 95% confidence intervals. CVC = central venous catheter.

The level of difficulty of the modules was considered appropriate by the vast majority of participants. Some found the airway and circulation modules too basic. These modules may benefit from addition of more advanced material. The relevance, organization, format and impartiality of the course were all rated favourably.

Responses to items addressing outcomes of the course were tremendously encouraging. Seventy-nine percent of respondents felt their technical skills had improved because of the course. A range of 92% to 97% believed their competence in airway, breathing and circulation management had improved. All respondents agreed their confidence had improved, and 90% indicated they would change some aspect of their practices. These findings are particularly encouraging, because intention to change practice has been shown to predict actual changes in behaviour.[9,10]

With respect to course content, the only significant theme that emerged regarding what should be removed from the course was "nothing," indicating all current course content should remain. If there were room to add content, a few themes were

Fig. 3. Mean responses to Likert-scale items related to teaching and learning methods used in the course. Error bars represent the 95% confidence intervals. ACES = Acute Critical Events Simulation.

prevalent: more on medications (which could be accomplished with a pocket reference card), pediatrics and mechanical ventilation. However, none of these recommendations were given by more than 14% of respondents.

A prevalent comment for course improvement was to offer more simulations. Although possible, increasing the number of scenarios for each participant would have a substantial impact on the course's length and cost, given the logistics, equipment requirements, personnel and cost involved in running simulations.

The course was designed such that the modules are not a prerequisite to the simulations; feedback focuses on crisis resource management more than medical decisions specific to the cases. Although skills in crisis resource management are generic,[11] problem-solving skills are not,[12] so it may be beneficial to offer the simulation module last, as some respondents suggested. However, the course and simulations were rated favourably even by those who entered the simulation sessions before completing all other modules.

Participants were asked explicitly about the impact of the course on their confidence. Encouragingly, 84% of respondents indicated their confidence had increased, either with respect to critically ill patients generally, rural practice or inclusion of emergency or inpatient care in their practices. This sentiment was echoed in responses to the open-ended question about confidence. It was a primary goal of this program to augment trainees' confidence to practise in a rural or remote setting including emergency or inpatient care. Results from the questionnaire suggest this goal was achieved.

Limitations

The results of this evaluation are limited by the method, data source and sample size. A questionnaire was used to collect data from as many participants as possible, although the depth of qualitative information to be gained was limited. Furthermore, results pertaining to competence and intent to change are based on respondents' self-perceptions, not testing or performance observation. The small sample size reflects the cohort to whom this course was delivered and limits the generalizability of results. Finally, women outnumbered men in this sample; it is not clear if and how this may have affected findings. Although this study was an encouraging first step in evaluating the course, further research is required to determine whether competence is objectively increased or changes in practice are indeed implemented.

CONCLUSION

The ACES course was adapted for and delivered to second-year residents in family medicine at the University of Ottawa to enhance their competence in identifying and resuscitating critically ill patients, and to increase their confidence to work in rural or remote areas and to include inpatient or emergency care in their practices. The course was rated as relevant by all participants, who indicated perceived increases in competence, increased confidence and intentions to change aspects of their practices.

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The occasional teacher. Part 4: feedback and evaluation

William Edward Osmun, MD, MClSc, CCFP
Jennifer Parr, MD, CCFP
Department of Family Medicine, University of Western Ontario, London, Ont.

Correspondence to: Dr. William Edward Osmun, 22262 Mill Rd., Mount Brydges ON N0L 1W0; ted@smhc.net

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Feedback and evaluation are separate entities. Feedback is informal, nonjudgmental and brief, and hopefully provides information about recent performance to promote positive change.[1] Evaluation is, by its nature, judgmental. It measures learners against their peers, occurs at specific times (e.g., at the rotation's end) and will determine whether learners pass or fail a rotation.

As a rural preceptor, you may be the only instructor who sees a learner perform in multiple settings as he or she encounters multiple undifferentiated patient presentations and works with many health care professionals. As such, your feedback and evaluation will provide an important, holistic view of the learner, and you will be able to more accurately judge the student's strengths and weaknesses.

For feedback to be fair and effective, the preceptor should know what expectations are appropriate for the learner's level of training. For the occasional teacher, this may be difficult. To become familiar with the school's expectations of the rotation, it can be helpful to review the objectives for the rotation. As you become more experienced, delineating appropriate expectations becomes easier. It is helpful to discuss your expectations with the learner early in the rotation. Make the learner aware that feedback is a normal component of your daily interactions.[2] Identify feedback, because it is often not recognized as such by the learner.

To be effective, feedback should be specific to what was observed, occur soon after the event and be limited to 1 or 2 items.[2] Although there are those who feel that the preceptor should not use second-hand information (e.g., from other health professionals or patients),[3] we feel it should be shared, provided the information is specific and helpful. For example, if a nurse tells you that a learner was rude, ask what exactly the learner did. Often the learner is oblivious to the affront, and it was unintentional. If a patient complains, you will need to discuss with the patient what the issues were. Vague comments are not useful; however, if you get numerous complaints that the learner "didn't listen" or "seemed to be in a hurry" they will need to be passed on to the learner. Often, vague comments will necessitate increased direct observation of the learner, if possible, to understand what behaviours are giving rise to the problem.

Negative feedback will demand concrete examples; it is not enough to tell the learner they seem distracted or unfocused — they will want to know on what you based your observation. Recipients of negative feedback will often become defensive; this is a natural response, and the preceptor should try not to respond emotionally.[4]

It has been suggested that feedback can be given in a feedback sandwich.[1] The critical feedback is "sandwiched" within positive feedback. The intent is to lessen the sting of the negative and avoid a feeling of injustice. We don't find this particularly useful, because the positive comments often seem contrived when sandwiched. We do, however, consciously try to provide positive feedback at regular intervals so that the learner is aware that there is a culture of feedback. It is sometimes helpful to phrase the feedback in the vein of "you

are doing 'that' well but you would be an even better clinician if you did it 'this' *way*." In addition, it is helpful if the feedback is given in context of the learner's level, as in, "Most third-year clerks struggle with this ...". If you feel the learner is seriously behind the expected level, it is essential to call the postgraduate or undergraduate director of the university and discuss it.

Although feedback should be informal and supportive, evaluation is formal and judgmental. It is important that you as the preceptor be aware of what is being evaluated; a quick perusal of the rotation evaluation form before the learner starts will provide cues to the behaviours and skills expected. If you have serious concerns, these must be addressed with the learner early in the rotation and a program of remediation initiated. If this is not done, the student cannot be failed. Again, if you have serious concerns about the learner's performance, call the appropriate directors and they will be able to direct you through this difficult process. Fortunately, most medical students and residents are good to excellent, and this should be a rare occurrence in your practice.

Medical residents and students are high achievers who have performed very well all their lives. Many struggle with being anything but "excellent." Although it may be tough for students to swallow, the reality is that in medical school the vast majority of them have found their intellectual and academic peer group. Many find this difficult to adjust to and threatening to their self-esteem. There are preceptors who avoid their discomfort in judging others by rating everybody as "excellent." This creates difficulty, particularly if a learner has problems in other rotations, because this "excellent" evaluation creates an unrealistic self evaluation and will be used to defend the learner's performance. It is essential to be as fair as possible in your evaluations. Learners do appreciate realistic evaluations when they are put in context with other students and residents and performed face-to-face.

In addition, it is important to place as high a value on the portion of the evaluation that assesses communication and professionalism skills as the portion evaluating clinical skills. Residents and students need to be told whether they have good interpersonal skills and why this is essential to being a good physician. Many students and residents value knowledge and clinical skills over their ability to communicate and perform well within teams.

Giving feedback and evaluating learners is an important part of the preceptor's job. Appropriate feedback is important for both strong and weak students and, when given in a nonjudgmental, supportive manner, is much appreciated.

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The occasional management of narcotic exposure in neonates

Len Kelly, MD
Division of Clinical Sciences, Northern Ontario School of Medicine, Sioux Lookout, Ont.

Bryanne Minty, BSc
Faculty of Medicine, University of Manitoba, Winnipeg, Man.

Sharen Madden, MD
Joe Dooley, MD
Irwin Antone, MD
Division of Clinical Sciences, Northern Ontario School of Medicine, Sioux Lookout, Ont.

Correspondence to:
Dr. Len Kelly;
lkelly@mcmaster.ca

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Abuse of long-acting oxycodone is becoming commonplace in northwestern Ontario.[1] Among the many social and medical problems that arise from this is an increased incidence of use during pregnancy, leading to passive exposure and withdrawal in neonates. There are few Canadian data on the incidence of maternal narcotic abuse or neonatal abstinence syndrome (NAS). Standardization of diagnosis and treatment is still developing in the literature, as are treatment protocols among institutions. This paper will summarize relevant research findings and practical treatment options for rural clinicians.

INCIDENCE

The Sioux Lookout Meno Ya Win Health Centre delivers more than 320 neonates annually in a catchment area serving a population of 30 000, which is primarily composed of First Nation people.[2] In 2009, Kelly and colleagues noted a 13% incidence of maternal exposure to narcotics during pregnancy.[3] This is in distinction to the reported rate of 5% in one American study.[4] Unfortunately, the incidence noted by Kelly and colleagues is similar in scale to a 1992 report of exposure to cocaine in 12.5% of neonates born in a downtown Toronto hospital.[5]

Such pockets of substance abuse are documented internationally. In Yorkshire, UK, a recent study documented a significant rate of intravenous heroin abuse. In this prevalence study, women who abused substances had a concomitant rate of infection with hepatitis C of 41%.[6]

NEONATAL ABSTINENCE SYNDROME

Neonatal abstinence syndrome may result from withdrawal from opiates, cocaine, amphetamines or antidepressants. The constellation of irritability of the central nervous system and respiratory, gastrointestinal and autonomic symptoms was summarized in 1975 by Finnegan and colleagues.[7] The authors described the common symptoms that arise between 6 and 48 hours postpartum.[7,8] The most frequent, in descending order, are tremors, high-pitched cry, sneezing, increased muscle tone, fist-sucking and regurgitation.[9] Seizures can occur in 2% to 11% of infants who are undergoing withdrawal from opiates.[10] Although acute opioid withdrawal usually manifests within 6 to 72 hours after birth, it can appear up to 6 weeks postnatally.[8,11,12] Subacute withdrawal symptoms may occur up to 6 months after birth.[12,13]

In the 1970s, the United States was experiencing a wave of intravenous heroin abuse and subsequent withdrawal in neonates. These often premature and sick infants were shown to do better when addicted mothers were treated with methadone.[14] Much of the literature on NAS focuses on outcomes for urban-based methadone programs, and the more recent literature identifies treatment with buprenorphine as a safe alternative.[15,16] Pregnancies in women treated with methadone are associated

with high rates of NAS (25%–85%).[16–18] Interestingly, the dose of methadone is not always predictive of withdrawal in the neonate.[19,20] Infants born to women who had received either long-acting morphine or methadone seemed to have a similar duration of NAS.[20] In one randomized study from Europe, mothers who received long-acting morphine had better harm reduction because they used less additional street opiates than mothers who received methadone.[21] A 2008 Cochrane database meta-analysis found no significant difference in outcomes for opiate-dependent pregnant women who were given methadone, buprenorphine or long-acting morphine.[22] Because rural communities, particularly First Nation communities in remote areas, often do not have access to methadone programs, long-acting morphine may be a good alternative when required.

DIAGNOSIS

Infants who were exposed to drugs before birth may develop a wide variety of symptoms, but usually seem healthy at birth. As symptoms appear, infection and hypoglycemia need to be excluded. Maternal history and collateral history are the mainstay of initial risk assessment. Routine laboratory testing is not standard. Urine testing can identify drugs consumed in the previous week. Meconium testing can detect earlier use but does not detect use of oxycodone.[23]

The Modified Finnegan Neonatal Abstinence Score Sheet is becoming the international standard for assessing degree of withdrawal and parameters for treatment.[24] The system is somewhat subjective, but is a useful tool for assessing the occasional neonate exposed to narcotics.

The scoring system is available online.[25] Scoring is done after feeding in 2- or 4-hour intervals, and treatment with pharmaceuticals is commenced in neonates with scores above 8. Other scoring systems are available, including those by Lipscitz and Ortega.[26,27]

TREATMENT

Nonpharmaceutical treatment is sufficient for neonates who score low on a NAS scale, and includes low light and stimulation, swaddling, use of a soother and side positioning.[28] If the infant becomes more jittery and scores above 8 on the Finnegan scoring system, oral morphine is typically instituted.[29,30] The use of morphine as a first-line agent is supported by numerous studies and a 2010 Cochrane database meta-analysis.[10,31,32] Its advantage is seizure suppression, beneficial gastrointestinal side effects (decreases diarrhea) and assistance with development of the sucking reflex. At higher dosing, increased monitoring may be required because of risk of respiratory depression. A typical starting oral dose is 0.5 mg/kg/d divided into doses every 4–6 hours.[33] (Some protocols use incrementally higher doses for infants with higher Finnegan scores.[34]) If the infant vomits shortly after dosing, the dose is repeated. If vomiting occurs 10–30 minutes after administration, half the dose is repeated, and if any vomiting occurs after 30 minutes, repeat dosing is not required.[33] Once the infant is stable, weaning by 10% every 2–4 days may commence.[7] (Various concentrations of oral morphine are used in practice, including 1 mg/mL, 0.5 mg/mL, 0.4 mg/mL and 0.2 mg/mL.)

Some institutions prefer phenobarbital as first-line therapy (or in addition to morphine) for breakthrough seizures or in cases of abuse of nonnarcotic drugs. It is used at a dose of 5 mg/kg/d divided into 2–4 doses.[34] Some authors suggest an initial loading dose of 10–20 mg/kg, which can be given orally or intramuscularly, and generally needs no serum levels.[33] Provincial triplicate prescribing systems for controlled substances may affect hospital-based choice of agent. Physicians may choose phenobarbital because it makes for a more "acceptable" outpatient prescription once the neonate is discharged. In such cases, phenobarbital may be used as a first-line medication. Compared with morphine, phenobarbital is not as well supported by the evidence for the treatment of exposure to opiates; however, it is a familiar drug and is often also chosen for withdrawal from narcotics or unknown drugs in neonates. We have had a positive experience using it as a first-line treatment over the past 2 years. Oral clonidine, methadone or buprenorphine are other alternatives.[35–37]

Clinicians should be aware that naloxone is contraindicated for use at resuscitation at birth in all infants who are at risk for NAS, because it will precipitate acute withdrawal.[11]

BREASTFEEDING

The only contraindication to breastfeeding is positive or suspected HIV status.[38] Intoxication at birth may be reason to pump and discard the first feed, but abuse of narcotics or positive hepatitis C status are not contraindications to breastfeeding.[39–41] Exposed neonates have lower rates of NAS if breastfed.[38]

AFTERCARE

Many infants exposed prenatally to narcotics may not need specialized care. A recent cohort study done in England compared neonates with NAS who underwent either treatment in a neonatal ward or routine postnatal rooming-in. The authors found the latter group had a shorter length of stay with no other differences in outcome.[42] A 2007 Vancouver study showed that rooming-in was associated with a significant decrease in the need for treatment for NAS, and mothers in the rooming-in group were more likely to take their babies home with them.[43]

The length of stay reported in the literature ranges from days to weeks.[8,44,45] Not all of the neonates' pharmacologic treatment needs to be in hospital.[46] One study from the United Kingdom reported that 29% of neonatal units allowed infants to be discharged home while taking medications (including phenobarbital or morphine).[46]

Infants who have been prenatally exposed to narcotics need careful consideration and safety plans for discharge. Common initial recommendations include keeping all at-risk infants in hospital for at least 48 hours to ensure no late onset of symptoms from NAS. Despite somewhat chaotic family environments, many exposed neonates may be cared for within their families and may be candidates for outpatient treatment and weaning of medication. An Australian study of outpatient follow-up of 51 neonates who received treatment for NAS demonstrated a 92% follow-up rate and shorter lengths of treatment with morphine or phenobarbital.[47]

Long-term studies of cognitive outcomes have not been a concern because, unlike alcohol, narcotics are not teratogenic.[48] A multiyear follow-up of infants with NAS demonstrated no cognitive impairment at preschool or school ages.[48]

CONCLUSION

Rural clinicians may encounter infants with normal birth weights and Apgar scores who subsequently develop tremor, diarrhea, furtive hand-sucking and a high-pitched cry. Such neonates need frequent monitoring and the institution of a scoring system to detect NAS, such as the Modified Finnegan Neonatal Abstinence Score Sheet. If the Finnegan score is above 8, oral morphine or phenobarbital may be required for several days or weeks. Breastfeeding is encouraged unless HIV infection is present.

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Country cardiograms case 40

Ahmad Ghaith Tarakji
Faculty of Medicine, University of Aleppo, Aleppo, Syria

Ahmad Raed Tarakji, MD, FRCPC, FACP, FASN
Department of Medicine, Yarmouth Regional Hospital, Yarmouth, NS

Uzma Shaheen, MBBS, FRCR(London)
Department of Diagnostic Imaging, Yarmouth Regional Hospital, Yarmouth, NS

Correspondence to: Dr. Ahmad Raed Tarakji, Nephrology & Hypertension Maritime Clinic, Yarmouth Regional Hospital, 60 Vancouver St., Suite 405, Yarmouth NS B5A 2P5; atarakji@swndha.nshealth.ca

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A 43-year-old man presents to a rural emergency department with "muscle spasm" and "extreme twitching" in the middle of his chest wall. The symptoms occurred twice the night before and then multiple times since he awoke that morning.

He has a history of bradycardia–tachycardia syndrome, consisting of episodes of fast atrial fibrillation with symptomatic asystole following the termination of tachycardia. He underwent placement of a permanent transvenous ventricular demand inhibited (VVI) pacemaker at a tertiary care hospital 9 days before his presentation. He reports no recent trauma to the chest, scratching over the site of the pacemaker or strenuous exercise.

The 12-lead electrocardiogram is shown in Figure 1. What is your diagnosis?

For the answer, see page 108.

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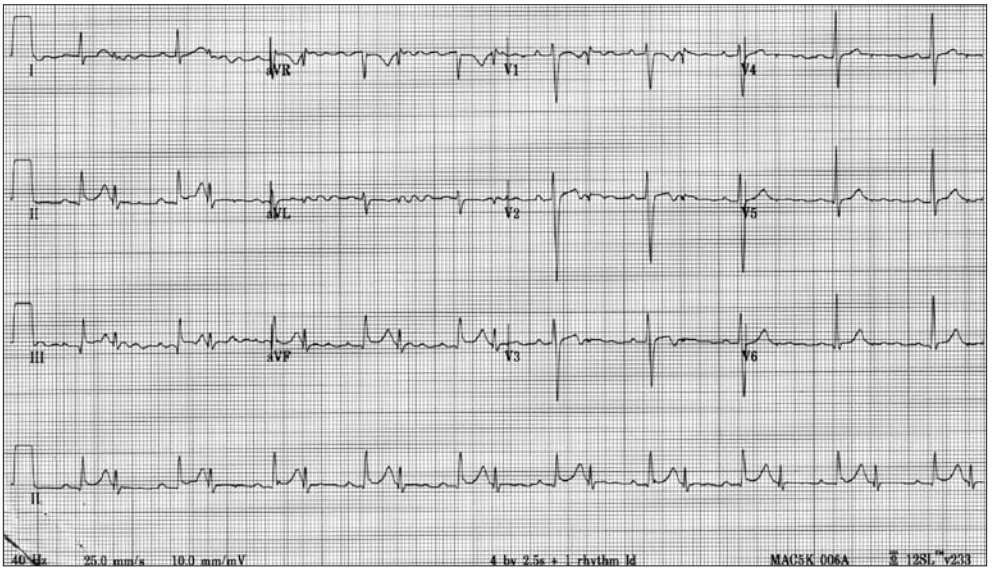

Fig. 1.Twelve-lead electrocardiogram of a 43-year-old man with a permanent pacemaker, with "muscle twitching" in his chest.

"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*, 45 Overlea Blvd., P.O. Box 22015, Toronto ON M4H 1N9; cjrm@cjrm.net.

Professional isolation in small rural surgical programs: the need for a virtual department of operative care

Stefan Grzybowski, MD, MClSc
Jude Kornelsen, PhD
Centre for Rural Health Research, Vancouver, BC, and the Department of Family Practice, University of British Columbia, Vancouver, BC

Louis Prinsloo, MD
Northern Health Authority, Prince George, BC

Nevin Kilpatrick, MD
BC Women's Hospital & Health Centre, Vancouver, BC

Robert Wollard, MD
Rural Coordination Centre of BC, Vancouver, BC, and the Department of Family Practice, University of British Columbia, Vancouver, BC

Correspondence to:
Dr. Stefan Grzybowski;
sgrzybow@interchange.ubc.ca

Small-town Canada depends on rural surgical services to support local emergency services, maternity services and access to basic surgical care. Despite this, rural surgical services are under siege. Communities are faced with an aging workforce in the roles of general practitioner with enhanced surgical and anesthetic skills, and rural operating room nurse.[1–4] There are limited opportunities for training and continuing medical education (CME)[5–7] and a lack of adequate infrastructure for operating rooms.[8]

Additionally, in the past 10 years a wave of service closures in small hospitals has been triggered in part by regionalization and the concomitant centralization of services in referral centres. This centralization has raised questions about the costs of maintaining services in small communities and the safety of such services.[8–10] Although the evidence that informs planning is scant, the existing research is supportive of the quality of care provided in small surgical programs in rural areas.[1,11–13]

Despite this, the search for administrative efficiencies can lead to ad hoc decision-making and closure of services in vulnerable small communities, leaving rural residents to travel greater distances to access basic care and, in some instances, leading to less than optimal outcomes.[14] When this happens, there is little capacity to foresee the cascade of unintended consequences for patients, their families and entire communities in which their health and welfare are inextricably embedded.

THE SYMPOSIUM

With the goal of understanding the complex array of consequences to society, health and health services, general practitioner anesthetists (GPAs), researchers of rural health services and decision-makers assembled in Vancouver, BC, Sept. 23–24, 2010, to begin the process of unravelling the undercurrents of sustainable care in small rural communities, starting with the role of GPAs. The symposium was sponsored by the Centre for Rural Health Research, the Rural Coordination Centre of BC and Perinatal Services BC, and focused on the following objectives:

- recognizing and supporting the role of GPAs in sustaining safe birth in rural communities;
- documenting current experiences of GPAs in rural communities, specifically with regard to maternity care and emergency services;
- creating a structure for integrated knowledge translation by involving policy- and decision-makers; and
- formulating a plan of integrated action involving research, education, practice and policy initiatives, and establishing working groups.

THE VIEWPOINT OF GENERAL PRACTITIONER ANESTHETISTS

The proceedings were informed by 8 GPAs from a range of rural communities in British Columbia serving catchment populations of less than 4000 to greater than 100 000. In attendance were key decision-makers (including leads of

perinatal and child health services, senior and program medical directors, and health policy analysts) from the northern, interior, Vancouver Island and Vancouver coastal health authorities, along with key stakeholders from interested organizations such as Perinatal Services BC, the Rural Coordination Centre of BC and the Ministry of Health Services.

The GPA participants noted that although call schedules varied with catchment size, these professionals were not only responsible for supporting surgical slates and emergency surgery (including cesarean delivery), but were often the highest-level providers of critical care available for consultation in their communities. General practitioner anesthetists from small communities described their sense of professional isolation and the stress of carrying a pager, knowing that when critical care is needed they will be responsible for patients' lives. The cumulative experiences of these GPAs demonstrated the remarkable contribution provided by this professional group to health care in their rural communities. This was evident not only through the array of settings in which they applied their skills, but also through the attendant discussion of the overall medical competence and confidence that their presence provided to the community.

One clear theme arising from the discussion was the lack of communication among GPAs, even those from geographically contiguous communities sharing similar practice-related problems. This recognition among the attendants naturally led to the discussion of the potential for a network infrastructure for GPAs to provide support, advocacy, profession-specific CME content and strategies that mitigate the intensity of rural practice across health authorities and across the province.

Beyond professional isolation, a number of additional common problems were identified by the GPAs in attendance. For example, although there are training programs available in Canada that lead to practice privileges for GPAs, there is a lack of academic certification and associated portability of those practice privileges. Additionally, attendants noted issues common to all of rural practice, including onerous call schedules, difficulty finding locums and challenges accessing CME. For this group, however, these challenges were more pronounced owing to their specialized skill set and had more important implications because of their wide-ranging responsibilities to emergency care in the communities.

ABORIGINAL CONCERNS

Planners and attendees recognized that the issue of sustainable care in rural areas is of particular importance for Aboriginal patients and communities. This is because of the confluence of such communities and rural geography, but also because of the traditional kinship and community ties that exist within Aboriginal communities and the profound connection they have with the land.

VIRTUAL BIRTHING ROOM OR SUITE

Attendees recognized that maternity services are an important dimension of surgical services in rural areas. If one considers a "virtual birthing room" to represent the number of parturient women in rural BC supported by the services of GPAs, one arrives at a figure of about 6000 of the more than 42 000 births that occur annually in the province. Cumulatively, this would be comparable to the number of annual deliveries at our largest obstetric facility, BC Women's Hospital & Health Centre.[15] Providers of rural care depend on local surgical services to back up intrapartum maternity services. When surgical services are unavailable the maternity service usually closes, which has a significant impact on women and their families. A more sustained impact on the community as a whole has also been noted, involving the loss of young families because of inadequate health care services, and the concomitant effect on local industry and, eventually, community life.[9,16,17]

By conceptualizing the collective province-wide service as a "virtual birthing suite," we move the challenges of maintaining services and potential solutions from a series of isolated problems to the realm of collective responsibility. We do this already in large hospitals, but we resist it when the "wards" are separated geographically. For example, it is hard to imagine BC Women's Hospital & Health Centre closing one of its labour and delivery units because of a staff member's illness or difficulty finding anesthetic coverage, yet we routinely close services in small communities for similar reasons.[18] By moving to a collective sense of responsibility and joint effort we would call upon the anticipatory planning and quick solution-finding that is the daily bread of institutional medical and nursing leadership and administration.

CONCEPT OF WARDS

Under the rubrics of "quality assurance" and "patient safety," considerable work has already been done in larger institutions in promoting joint interprofessional engagement in finding systemic solutions in complex systems of care. These same lessons could be adapted

to a dispersed birthing or surgical suite, composed of a series of "wards," increasingly bound by high-tech communications and distant consultation to support the onsite team of practitioners whenever a service gap appears "on the ward." All that is lacking is the imagination to configure and support such a system. The potential benefits to patients, providers and whole communities are enormous.

SOLUTIONS

It was clear from the proceedings that an evidence-based plan is needed to address some of the issues raised, including the following:

- creating a registry of GPAs in BC and their level of GPA-related activity (this is particularly pertinent because GPAs reported that the financial incentives for general practice outweighed those for anesthetic practice);
- identifying GPAs' scope of practice;
- considering practice-related questions, such as why the practice life of GPAs is so short (< 5 yr on average); and
- evaluating the importance of GPA services to the quality of care provided in rural emergency departments.

These ideas reflect some of the gaps in our knowledge about GPAs that need to be filled if we are to move forward with evidenced-based planning for sustainable care in rural areas.

COORDINATING ORGANIZATION

There is an additional need for a coordinating organization to take up the cause of rural practitioners with enhanced skills. The Rural Coordination Centre of BC, which is already charged with the task of sustaining rural health care, could play a role in advocating for and channelling resources to support small surgical teams in rural areas. The creation of a virtual department of rural operative services could be a mechanism to identify and contribute to the support needed to maintain these interprofessional teams. The activities of the virtual department would relate to quality assurance and improvement. Most importantly, the department would create a forum for the expression of local concerns about the conditions of surgical services.

The alignment of GPAs with general practitioner surgeons and operating room nurses would provide a collective voice supporting the development of interprofessional solutions to common problems faced by these service providers. This alignment of professionals would enable team development underscored by a recognition that each provider group is interdependent and essential to the complex complement that makes surgical services possible in small communities. It is time we recognized the remarkable contributions made by rural surgical teams and created the structure needed to sustain them.

Acknowledgements: The authors gratefully acknowledge all those who participated in the General Practice Anesthetists' Symposium, held Sept. 23–24, 2010, in Vancouver. The authors extend specific acknowledgements to Dr. Granger Avery, director of the Rural Coordination Centre of BC, and Kim Williams, executive director of Perinatal Services BC, for their agencies' support of this meeting.

Competing interests: None declared.

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Rural electives: a clinical and community experience

Lindsey Sutherland, MSc
Faculty of Medicine & Dentistry, University of Alberta, Edmonton, Alta.

Correspondence to:
Ms Lindsey Sutherland;
lnjackso@ualberta.ca

Within hours of arriving in Hinton, I was scrubbed in and assisting on a cholecystectomy while my 3 medical school classmates were off to the family clinics and the emergency department. We were part of a pilot project at the University of Alberta that sent 13 students to 3 rural communities: Hinton, Peace River and Grand Prairie. The program's goal was to introduce students to rural medicine and to provide clinical experience.

During our 4 weeks in Hinton, we spent time learning in surgery, radiology, endoscopy, emergency, obstetrics and family medicine. It was so exciting to practise doing stitches, taking blood pressure readings and taking patient histories, and rewarding to help diagnose bowel obstructions, which we had just learned about in lecture. The hospital and clinic staff were amazing to work with, and the patients were very accommodating and encouraging. I was impressed by the hospitality that the entire community offered the 4 of us while we were in Hinton. The grocery clerk recognized us from the article in the local newspaper and asked us each time how our learning experience was going and what we thought of her hometown. Rather than staying in hotels, we were able to stay in the homes of community members who graciously hosted us during our 4-week stay. We were included in community events and became familiar with the community members, businesses and facilities.

We made plans to speak at the local secondary schools to students who may be interested in health care. The 4 of us had been raised in small communities across Canada, and we wanted to help these students learn how to overcome any barriers that they may perceive about attaining higher education. We hope they now believe rural students are able to accomplish their dreams and be successful in medicine.

Although our time spent in Hinton was brief, the involvement in our educational experience by the local physicians, community members and other learners in Hinton was greatly appreciated. This experience highlighted that weekend electives are important but cannot provide the same type of experience that we were able to have while living in a rural community for an entire month. Rural placements, whether clinical or preclinical, are an extremely important initiative and imperative to reducing the shortage of rural physicians. The knowledge gained from rural family physicians can include how to manage a practice, work with fewer resources, organize patient travel to the city and the many other aspects that make rural medicine and life so exciting.

It is hard to imagine how someone could be involved in a similar experience and not be influenced to consider practising medicine in a rural area, but perhaps I am biased by my rural background. To ensure that a rural elective is a positive experience, students should be welcomed and integrated into the community during their brief introduction to rural medicine. Belonging to a community and identifying as a contributing member of that community is a powerful motivator to return to a similar environment in the future.

Abridged version of the winning entry for the SRPC Student Essay Contest.

Competing interests: None declared.

Clinical courage

I read with interest the president's message of the Spring 2011 issue of *CJRM*.[1] "Clinical courage" is a very good description of what is required when you are alone in the emergency room in a rural hospital at night or on a weekend.

Along with courage, there must be competence and comfort. I practised in a rural hospital in southern Ontario for 38 years. I trained in anesthesia and obstetrics because I knew they would be part of my practice. In 1963 there were no family practice programs, and you selected what was best for you. We had an excellent surgeon in town, so I used my skills in anesthesia and obstetrics regularly. In my practice, I had to be comfortable inserting chest tubes, performing intubation and lumbar punctures, and so on.

The only way to accomplish this level of competence is to work in a large emergency department or operating room where you can review your skills frequently. To keep abreast of emergency procedures, I used to go to an operating room in Hamilton to learn new techniques in anesthesia every year or 2, or I went to a large teaching hospital in the United States or Canada for an intensive course in emergency medicine every 2 years. Many teaching hospitals will let you do that, and they will recognize you when you come back to refresh your procedures.

Then, when you are confronted with a diagnostic problem, you can perform the necessary procedure without having to send someone home or elsewhere because you are uncomfortable. Advanced Trauma Life Support, Advanced Cardiac Life Support and other courses give you the algorithms, but you need the practical experience to make you comfortable. Your rural patient will not fault you for trying a procedure if you know what to do and will try.

Peter Dunlop MD, FCFP (retired)
Dunnville, Ont.

Reference

1. Wootton J. President's message. Clinical courage. *Can J Rural Med* 2011;16:45.

I fully endorse the sentiments of Dr. John Wootton in his recent president's message.[1] However, I cannot take credit for the term "clinical courage." Like Dr. Wootton, I am not entirely sure where the term originated, but I do know that much of the vocabulary we acquired in the early days of organized rural medicine in Canada actually came from Australia. Rural doctors there had come together nationally before those in Canada.

Among the many early Australian activists for rural medicine was the legendary general practitioner–surgeon Dr. John (Jack) Sheppard, former president of the Rural Doctors Association of Australia and founding president of the Australian College of Rural and Remote Medicine. In the early 1990s, Jack produced a number of excellent position papers on general practitioner–specialists, and I suspect I may have picked up the term from one of those. Of course, there were any number of inspiring initiatives on rural health that came from Australia at that time, including a great deal of fine analysis and vocabulary originating from the pen of Dr. Roger Strasser, who, as current dean of The Northern Ontario School of Medicine, continues to enhance the Canadian rural health scene. The term may have originated from any number of wonderful Australian field and academic doctors who cared so much for their rural populations.

One term missing from Dr. Wootton's president's message was always linked in my mind to "clinical courage." This is the concept, also from Australia, of "learned helplessness," referring to the manner in which students and residents in family medicine are taught in many direct and subtle ways to find ways to refer cases. Of course, they then carry this mindset into practice, and regular continuing medical education only reinforces the attitude. I have always felt that the specialist exists to serve the generalist, not the other way around. One must look in rural areas these days to find what Sir William Osler held as a basic principle of the specialist–generalist relationship in all medicine throughout the ages.

I was once challenged to come up with a Canadian analogy for "clinical courage." The best I could come up with was a hockey player tapping the ice with his stick to call for the puck. Canadians will know what I mean.

Keith MacLellan, MDCM, FRRM
Shawville, Que.

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Country cardiograms case 40: Answer

Ahmad Ghaith Tarakji
Faculty of Medicine, University of Aleppo, Aleppo, Syria

Ahmad Raed Tarakji, MD, FRCPC, FACP, FASN
Department of Medicine, Yarmouth Regional Hospital, Yarmouth, NS

Uzma Shaheen, MBBS, FRCR(London)
Department of Diagnostic Imaging, Yarmouth Regional Hospital, Yarmouth, NS

On examining the electrocardiogram in Figure 1 (on page 102), we can identify on the lead II rhythm strip (bottom of the tracing) an underlying sinus rhythm as the patient's "native rhythm." Normally, in a paced rhythm one sees pacemaker spikes after appropriate asystolic pauses from the previous beat of the native rhythm. These pacemaker spikes are followed by paced beats, which are seen (because the pacemaker wire resides in the right ventricle) as wide, distorted QRS complexes with a modified left bundle branch block pattern.

In the electrocardiogram of this patient, we can see no such pauses, and yet there are pacemaker spikes falling exactly after each T wave with no succeeding QRS-complex "capture beats." The patient was feeling "twitches" that coincided with those spikes seen on the bedside heart monitor, indicating there was stimulation of the muscles of the chest wall. Displacement of the pacemaker wire was suspected. A chest radiograph was obtained, which confirmed the wire was in the superior vena cava (Fig. 2).

The patient was referred back to the tertiary care hospital for repositioning of the pacemaker lead. A follow-up chest radiograph after repositioning showed proper placement (Fig. 3).

DISCUSSION

Bayliss and colleagues[1] first used the term "pacemaker-twiddler's syndrome" to describe a patient who had dislocation of the pacemaker wire with retraction into the neck, causing "failure to pace" and brachial plexus stimulation. The authors explained,

> lead traction is the result of a capstan effect produced by a rotating pulse generator within a pocket which has become too capacious. Rotation can occur either spontaneously or as the result of repeated twiddling on the part of the patient.[1]

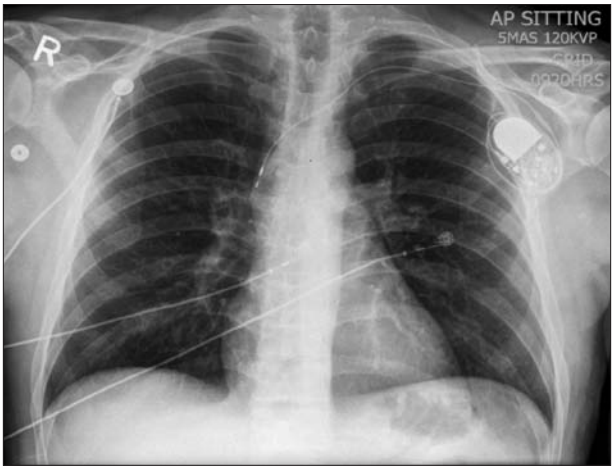

Fig. 2. Chest radiograph showing the tip of the pacemaker out of position in the proximal superior vena cava. The pacing generator had rotated about 180 degrees counterclockwise, and the lead was pulled around it.

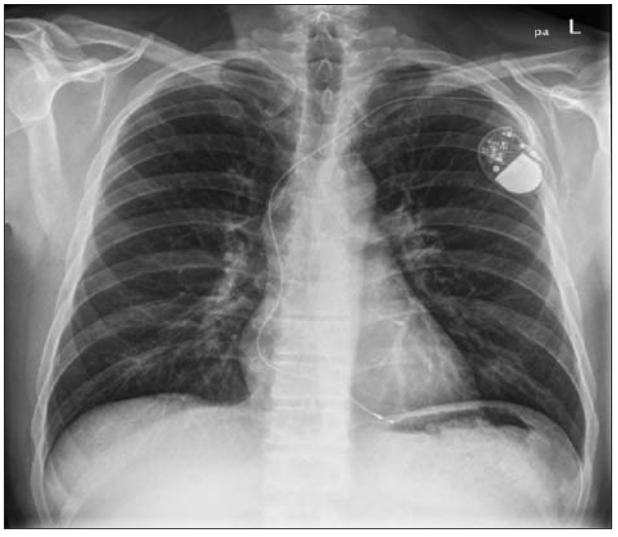

Fig. 3. Follow-up chest radiograph showing proper placement of the pacemaker's tip in the right ventricle, with the pacing generator rotated 180 degrees clockwise.

Subsequent case reports described the syndrome as a complication of pacemakers and defibrillators, when the patient consciously or unconsciously causes the pacing generator to rotate in its pocket, resulting in dislodgment of the tip.[2–4] It has been suggested that the generator be sutured in place to fascia and that the pocket size be made as small as possible.[3,4]

Our patient's pacemaker wire had been initially inserted and attached with Prolene sutures over a Silastic sleeve. The generator had been placed in an antipectoral pocket, which was closed with 2 layers of absorbable sutures. He reported that 3 days after insertion of the pacemaker, he had started to experience intermittent "mild muscle spasms" or "electrical snaps" centrally in his lower chest. The symptom had occurred 10–12 times in a row before stopping. These "spasms" had become more intense and frequent the day he presented to our emergency department. The patient was thin and well-built, so likely the pocket was a little loose. This may have caused the generator to rotate with movement of the left shoulder, causing the wire to slowly slide back because of the "capstan effect" noted by Bayliss and colleagues. During the repositioning procedure, it was found that the ties around the wire were loosened, and the wire was freely sliding within the sleeve.

For the question, see page 102.

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Country Cardiograms

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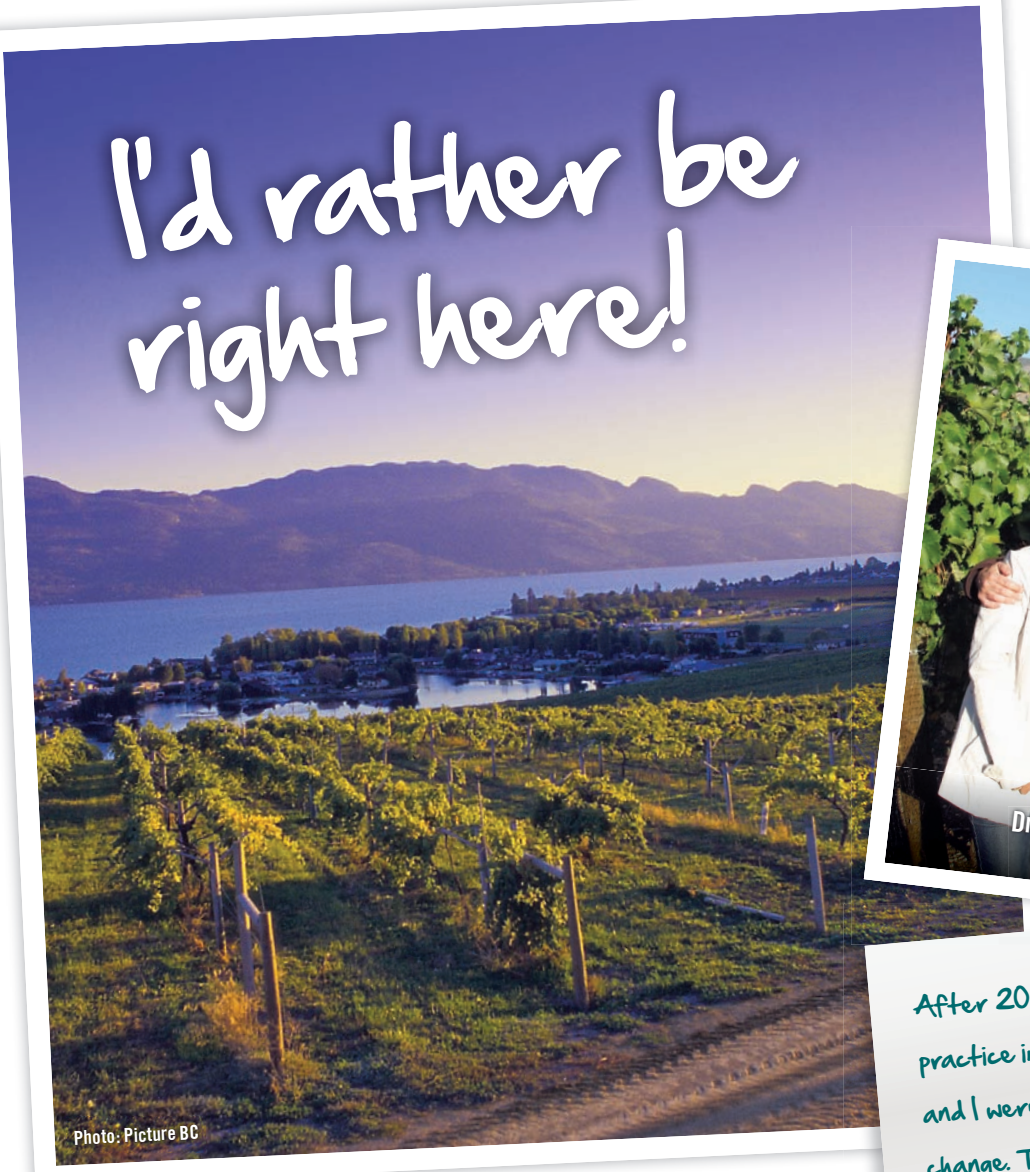
I'd rather be right here!



After 20 years of family practice in the UK, my family and I were looking for a change. The people in Penticton are very welcoming and we love the lakes and the vineyards!

Dr. Peter Entwistle

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